AN

INQUIRY

INTO THE

SYMPTOMS and TREATMENT

OF

CARDITIS;

OR, THE

INFLAMMATION of the HEART;

Illustrated by

CASES and DISSECTIONS.

BY

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Ου κατα αξιωματα κενα και νομοθεσιας φυσιολογητεον, αλλ' ὡς τα φαινομενα εκκαλειται.

EPICURUS.

BATH;

Printed by WOOD and CUNNINGHAM,

At the City Printing-Office,

For LONGMAN, HURST, REES, and ORME, London.

1808.

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PREFACE.

In presenting this small volume to the public, the author is actuated by no other motive than a desire of contributing, to the general stock of information upon medical subjects, what he hopes may not be wholly unproductive of practical advantage.

The task might have been more ably performed, if it had fallen into other hands. He, however, who withholds information, through diffidence of his ability to communicate it, is not less guilty of a breach of duty, than the person whose only excuse is indolence. Many offenders of this description, of whom nothing has ever been known beyond the narrow sphere in which they exercised their art, might perhaps have instructed posterity, and enrolled

their names with those of SYDENHAM and HEBERDEN!!

Two of the Cases, which occasioned the following Inquiry, happened in the practice of other gentlemen, and have been communicated with a liberality peculiar to those, who are zealous in the advancement of medical science. The first occurred to Dr. Haygarth, whose industry and accuracy, in recording the phenomena of diseases, are too well

known to require any comment. The particulars of the second are derived from the united observation of Dr. Boisragon and Mr. Tudor, and have the concurring testimony of Dr. Parry, who saw their patient in the latter part of her illness. The subject of the Case which fell under the author's observation was the daughter of a respectable surgeon, within a few miles of this city, who had consequently an opportunity of observing all the symptoms as they

occurred. A very remarkable circumstance, in a Case which Doctors Clutterbuck and Birkbeck attended, was communicated by the latter.

Facts thus authenticated will be readily admitted as unobjectionable data on which we may reason with confidence. If the author should not have succeeded in this attempt, he will be thankful for a candid correction of his errors, Regarding it, moreover,

as an incitement to observation and pathological research, it will always afford him pleasure to receive information upon a subject, which has lately engaged much of his attention, and which the *dogmas* of system-makers have hitherto caused to be neglected.

It may be thought that there was no necessity for publishing the Cases in a separate work, there being several periodical publications instituted for the pur-

pose.—Had they been sent to the editors of those, they would in all probability have appeared singly; and single cases, it is well known, make little impression. SYDENHAM was of opinion that our knowledge of diseases could not be much enlarged by this practice.—A very important service might be performed by any person, who would take the pains to arrange the valuable facts scattered through the journals of medicine.

If, in the following pages, the opinions of some most respectable authors have been animadverted upon rather freely, this was not done without reluctance. The new and important facts, which the Cases presented, authorized investigation; and, in laying them before the public, it became necessary to show how far they contradict opinions, delivered by men, whose authority (of some at least amongst them) can make even "error venerable." *Naturæ*

itaque leges, si hominibus non verba dare, sed reapse eos juvare volumus, notare, meditari, observare, eisque adamussim obsequi, ac servire opus est.—Baglivi. Prax. Med. lib. 1, cap. 1.

BATH,
Dec. 1, 1808.

ERRATA et ADDENDA.

P. 9, l. 5, for *are* read *be*.
P. 28, l. 8, after *say* insert *precisely*.
l. 14, dele *comma* after *that*.
P. 61, l. 5, for *decription* read *description*.
P. 93, l. 6, after *cases* add, 'Nor was it described by the patient until the seventh day of his illness; but it probably took place sooner, and was not attended to in consequence of the affection of the head, which prevailed to so great a degree as at one time to afford suspicion of Phrenitis.'
P. 104, l. 16, for *foegoing* read *foregoing*.
P. 135, l. 5, for *opportere* read *oportere*.
P. 185, l. 7, after *heart* add, 'or leeches, as in the case of Master W. but repeatedly and in greater numbers.'

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INQUIRY, &c.

SECTION I.

General Observations on CARDITIS, *or the Inflammation of the Heart.*

IT being generally admitted that CARDITIS is one of the most obscure diseases to which mankind are exposed, the physician who has had an opportunity of witnessing any part of its progress, so that new light may be thrown upon it, would be guilty of unpardonable negligence were he not to publish his observations.

It is a duty which he owes to his profession and to humanity; for there is not any work, to my knowledge, in which the essential and secondary symptoms of this disease are accurately investigated and distinguished.* Facts, moreover, whatever they may tend to prove, or whatever hypotheses they may contradict, cannot fail to be interesting to the impartial inquirer.

The inflammation of the heart is not a frequent occurrence; yet I am inclined to believe that it

* By *essential* symptoms I mean such as belong to any disease exclusively; by *secondary*, such as belong to various other diseases, or are of casual and uncertain occurrence.

happens much oftener than has been supposed. Anatomists have sometimes detected its effects in the dissecting-room, when its presence was never suspected by the physician. And if the best systematic writers, some of whom were also observant practitioners, have not been able to furnish their readers with any marks by which it can be distinguished from other diseases, we may reasonably conjecture that it has been frequently overlooked by ordinary observers.

Many other diseases of the heart are involved in great obscurity; but it is probable that a more accurate observation of their phenomena, and more frequent

inspection after death, might throw great light upon them also: "*Nec dubium est, quin simili, in cordis motum ac vibrationes, quam in arteriarum oscillationes, adhibita medicorum attentione, ac sub frequentiore illius in cadaveribus inquisitione, hujus visceris morbi a densa, qua involvuntur, caligine possent liberari.*"*

There is an affection of this organ which was not known forty years ago, when the late Dr. Heberden first called the attention of physicians to it, and which is occasionally met with at present by almost every practitioner of

* Frank de curandis Hominum Morbis, lib. ii. p. 172.

discernment.* I mean Angina Pectoris; and happy should I be to add, that the investigations to which his observations gave rise, have been as successful in a remedial point of view, as in a philosophical one; in pointing out means of cure, as in illustrating symptoms and causes.† But although we have not profited by any curative indications derived from them, they have enabled us to prepare the friends of our pa-

* Medical Transactions by the College of Physicians, vol. ii. p. 59.

† See an "Inquiry into the Symptoms and Causes of the *Syncope anginosa* (angens), commonly called *Angina Pectoris*, illustrated by Dissections, by Caleb Hillier Parry, M.D." &c.

tients against impending danger, and thereby to lessen the shock which sudden dissolution must necessarily occasion. The case is perhaps less desperate with the disease under consideration; for if its presence can be ascertained, we are possessed of means which promise a cure.

That the inflammation of the heart should be a rare occurrence will not appear surprising, if we consider that its structure is entirely muscular, and that muscles do not readily inflame: they are the instruments of all our actions, and are wisely ordained to resist the most violent and long-continued exertions. The heart, as a muscle, then, ought to enjoy the

same privileges in a greater degree; since its motions are continued during the whole course of our lives, and it acts upon a mass of fluid which offers considerable resistance.*

* The more usual seat of inflammation is in those parts, in which fine injections enable us to discover the greatest number of capillary vessels, as the cellular, serous, and mucous membranes, and the skin. On the contrary, inflammation is rare in the muscular, osseous, cartilaginous, nervous, arterial, and venous systems, where few capillaries exist.

If then the capillary system be the seat of inflammation, we are naturally led to ask on what this depends. It cannot arise from any greater degree of sensibility in the parts, since in their natural state they possess very little. The pleura is scarcely at all sensible, when free from inflammation.

Some persons may think it useless to treat of a disease, whose presence there is so much diffi-

The tongue, which has more nerves on its surface than five times as much of any mucous membrane, is not so often inflamed as any other part of the body. The retina, which consists entirely of nerve, very seldom becomes inflamed. But if we assume with Bichat, an organic sensibility, derived from the ganglions, independent of the nerves of the brain, and upon which the functions of capillary circulation, secretion, exhalation, absorption, and nutrition depend; as more of these functions take place in the cellular, serous, and mucous membranes, and the skin, than in the muscular, osseous, cartilaginous, nervous, arterial, and venous systems, we can account for its greater frequency in the former; and inflammation may therefore be conceived to depend upon some alteration in the organic

culty in ascertaining; and which, were it known to exist, (they say) can only be removed with the life of the patient. To them, if such there are, I would address the following reproof of Lord Bacon:—"Therefore I will not doubt to note as a deficiency, that they inquire not the perfect cures of many diseases, or extremities of diseases, but, pronouncing them incurable, *do enact a law of neglect*, and exempt ignorance from discredit."

Before I proceed to the consideration of the cases, which have occasioned the foregoing remarks,

sensibility of the capillary system. The consequences of this alteration are, an afflux of blood into vessels to which it was before a stranger, debility, increased heat, &c.

it may not be improper to lay before my readers such information as I have been able to collect from systematic writers, and others, respecting this formidable disease: a disease which does not, like the generality of those incident to the heart, make its attacks by slow and perceptible approaches; but storms at once the citadel, which cannot be saved without the most prompt and vigorous measures.

It is necessary to observe in this place, that under the term Carditis, the inflammation of the pericardium also is comprehended; for although some authors have treated of them as distinct diseases, it is not probable that they can ever be distinguished in practice.

SECTION II.

Observations on CARDITIS *from various Authors, with occasional Remarks.*

ACCORDING to Avenzoar, Salius Diversus, and Rondeletius, the symptoms of *inflammation and abscess in the pericardium*, are, intense heat, frequent syncope, not so much pain as in pleurisy, with less difficulty of breathing, and less relief obtained by expectoration than in peripneumony.*

* Freind's History of Physic, 1727, part ii. p. 82.---Unable to procure the above

In one person dissected by Hildanus, where the heart was inflamed, and above four pints of extravasated fluid contained in the pericardium, the chief symptoms had been, pain about the left scapula, cough, and a violent palpitation. It must not be concealed that in this case the cavity of the chest was full of serum, the left lung being almost consumed, and the right very much inflamed.* The symptoms therefore cannot be attributed to the inflammation of the heart merely.

authors, I am obliged to rest satisfied with their observations as given by Dr. Freind.

* Hildani Obs. Chirurg. Centur. i. 43. This case has been very erroneously quoted by Dr. Freind.

In the *Sepulchretum Anatomicum* of Bonetus the following cases are recorded:—

Lib. ii. sect. 8. obs. 2. "In Britone quodam in Collegio Triquetico jacente, inflammatio cordis palpitationem induxit." Scoliographus ad cap. 29 Hollerii de morbis internis.

Lib. ii. sect. 9. obs. 17. "Quidam acuta febre prehensus est, cum thoracis incendio, cordis tremore, pulsu duro et inæquali, sectio à morte palam fecit adfuisse pericardii inflammationem."

Lib. ii. sect. 10. obs. 13.—"Quidam in flore ætatis acuta febre est prehensus, quam comitabatur sitis ingens, anxietas, thoracis incendium, syncope, animi

deliquium, cordis tremor, &c. Triduo e vita sublatus est. Sectio post mortem palam fecit fuisse pericardii inflammationem lethalem." Zacutus Praxis admir. lib. i. obs. 138.

These are not all the cases to be found in Bonetus of inflammation of the heart and pericardium, or its consequences; but the others are less to the purpose, being connected with affections of neighbouring parts; lib. ii. sect. 4. obs. 2: or the effect of external injury; lib. ii. sect. 4. obs. 4: or ulcer; lib. ii. sect. 10. addit. obs. 2.

Lieutaud relates two cases of *inflammation of the pericardium*. The symptoms were, fever, thirst,

excessive anxiety, dyspnœa, great pain and heat in the fore part of the chest, palpitation, and syncope, with a quick and unequal pulse.* In the same work are many cases of abscess, ulceration, &c. of the heart and pericardium. The symptoms enumerated are those mentioned above, with the addition of tightness of the chest, cough, and expectoration.† This author has collected numerous instances also of adhesion between the heart and pericardium, many of which were connected with other disorders; but the histories

* Hist. Anat. Med. lib. ii. obs. 669, 670.

† Ibidem, lib. ii. obs. 513, 517, 671, 672, 673, &c.

of all of them are too vaguely related for us to suppose that the progress of inflammation was accurately observed in any.*

In Morgagni's admirable body of pathology I have not been able to find more than one case, that can with any propriety be referred to the disease under consideration. It succeeded to an attack of pleurisy, and was characterized by thirst, dry cough, and syncope upon the patient's turning towards the left side. Upon dissection, the pericardium was found to be dilated, and filled with purulent matter diluted with serum. The membrane investing the

* Hist. Anat. Med. lib. ii. obs. 695, et seq.

heart was thickened and united to the pericardium by means of fibrous elongations.* One instance of ulcer is mentioned by this author: the symptoms were, pain in the region of the heart, and syncope.† He has collected many examples of adhesion between the heart and pericardium;‡ in two only of which were any symptoms observed, that could be supposed to arise from such a morbid appearance. These were, in the first, irregularity of the

* De Sedibus Causisque Morborum, epist. 24, art. 2.

† Ibidem, epist. 25, art. 17.

‡ Ibidem, epist. 4, art. 19, 20; epist. 5, art. 19, et seq.; epist. 8, art. 6, 7; epist. 22, art. 4, 5, 10, 11; epist. 24, art. 11.

pulse, and palpitation;* in the second, the usual symptoms of pneumonia.†

Ruysch describes a heart with its external surface extremely rough, by which it adhered to the pericardium. This adhesion arose from previous inflammation, in consequence of which the patient was seized with excruciating pain in the fore part of the chest, accompanied by constant fever.‡

Dr. Cullen refers the Erysipelas Pulmonis of Lommius to Carditis.§

* De Sedibus Causisque Morborum, epist. 30, art. 7.

† Ibidem, epist. 35, art. 12.

‡ Thes. Anat. 6, n. 36, not. 1.

§ Syn. Nos. Meth. g. 13. s. 1.

How far he is right will be best known from a careful perusal of that author's description of the disease. "Erysipelate etiam capi pulmo solet. Tum febris oritur longè ardentissima, dolorque ante et retrò acutus, maximè circa spinam, tametsi pectus non æquè grave et angustum est: spiritus erectâ cervice trahitur, et præ ardore æger, veluti equus à cursu, nares expandit, et linguam ut æstuans canis exerit: vomitus fit modò subcruentus, modò lividus, idemque aliàs bilem, et pituitam trahit: adest etiam frequens (quod familiarissimum hujus morbi signum est) animi defectio: tussis vel sicca est, vel flavum sputum trahit non multum imbutum san-

guine. Illud malum citissimè ac ferè semper hominem tollit. Evadere aliquis potest, si desertis interioribus, foras versum erysipelas est."* This affection, if it be any thing more than a severe peripneumony, cannot, I think, with any justice, be referred to Carditis. When the heart is inflamed, the pain is not felt chiefly about the spine, nor does it appear ever to occasion that extreme state of disordered respiration which Lommius so emphatically describes. Syncope, moreover, which he considers as the most constant symptom of his Erysipelas Pulmonis, does not always occur in

* Lommii Obs. lib. 2, p. 137.

Carditis; and I cannot find that vomiting of blood has ever been noticed in the latter.

The same disease has been described by Hippocrates, whose description Lommius follows rather closely, as may be seen by a comparison:—ὁκοταν δε ῥυση, πυρετος ἀπ᾽ ἀυτου γινεται ὀξις. και βηξ ξηρη. και πληθωρη ἐν τοισι στηθεσι. και ὀδυνη ὀξειη εν τοισιν ἔμπροσθεν και ὄπισθεν. μαλιστα δε κατα την ῥαχιν, ἅ τε των φλεβων των μεγαλων διαθερμαινομενων. και ἐμεοισιν, ἄλλοτε μεν, ὕφαιμον. ἄλλοτε δε, πελιδνον. ἐμεοισι δε και φλεγμα και χωλην. και ἐκψυχουσι πυκνα. ἐκψυχουσι δε, δια του ἅιματος την μεταστασιν ἐξαπινης γινο-

μενην. και μαλιστα διασημαινει τουτο, ὅταν ἐπι του πλευμονος ἐπιγενηται ἐρυσιπελας. και του πυρετου ἔη συνεχης ληψις. τουτο ἐι μεν δυο ἢ τριων ἢ τετταρων το πλειστον ἡμερεων διαχυθη και μεταστη το ἔνδον ἐς το ἔξω, ὑγιης γινεται ὡς τα πολλα.

" Cùm autem traxerit, febris acuta oritur, et tussis sicca, plenitudo in pectore, dolor vehemens in anterioribus et posterioribus partibus, præcipuè vero ad spinam, cùm nimirum magnæ venæ incalescant, et interdum quidem subcruentum, interdum verò lividum vomunt, pituitam verò et bilem etiam vomunt, crebròque animo linquuntur, quod ob repentinam sanguinis transmutationem contingit. Idque præ-

cipuè obortum esse in pulmone erysipelas indicat, sique febris assidua prehenderit. Huic siquidem duobus, aut tribus, aut quatuor ad summum diebus diffusum fuerit, et quod intus est foras transierit, plerumque sanus evadit."*

In Senac's *Traité du Cœur* we find some general remarks on the probability of the heart's being subject to inflammation, and on the causes which are likely to produce it, without any particular account of the symptoms.†

* De Morbis, lib. 1, p. 453. Ed. Foesii.

† This applies only to the first edition of that elaborate work in 1749. Histories of Carditis are probably related in a subsequent edition, which I have not been able

After some slight remarks on the equivocal nature of these, he says,

to procure. Lieutaud indeed gives cases of inflammation of the pericardium and its consequences from Senac, which are not to be met with in the edition of 1749; and other works contain references to cases and observations, which are not only inapplicable, but the cases and observations could not be found, after a diligent search, in any part of the treatise. Haller mentions his having read of its being reprinted. "Senaci opus *du Cœur* video apud Gallos vulgo nunc Bertino tribu, Senaci amico. Idem lego a Portalio recusum fuisse: *Etat de la Medicine en France*." HALLERI BIBLIOTHECA ANATOMICA, tom. ii. add. p. 775. In the catalogue of the library belonging to the Royal Medical Society of Edinburgh there is an edition of the year 1783, which must have been posthumous, as Senac died in 1770.

"Nous avons examiné les causes et les suites des inflammations et des abscès du cœur. Mais tel est le fruit de nos recherches; si la nature nous permet quelquefois d'appercevoir ses démarches, elle nous cache les secours qui pourroient les arrêter, ou les corriger: nous devenons plus sçavants, et le sçavoir ne sert souvent qu' à nous mieux faire sentir l'impuissance de l'art. Les inflammations du cœur sont difficiles à connôitre; si nous les connoissons, les guéririons-nous plus surement? Il est d' abord fort douteux si, dans les grandes inflammations de ce viscére, la mort n' est pas toûjours inévitable. Supposé que l'art n'y soit pas entiérement inutile, il ne

peut que hâter les remedes que demandent les autres inflammations: celles du cœur sont plus pressantes, parcequ'elles marchent rapidement; il faut donc que les secours soient plus prompts." He treats separately of the inflammation of the pericardium.

Van Swieten thinks that *inflammation of the pericardium* occurs much oftener than is supposed. The symptoms, according to him, are, great heat about the middle of the thorax, absence of pleuritic pain, disturbed pulse, and syncope. Notwithstanding he mentions the absence of pleuritic pain as pathognomonic of the inflammation of the pericardium, he is of opinion that it

may often accompany pleurisy and paraphrenitis.*

While Van Swieten mentions the absence of pleuritic pain as essential to the character of Carditis, we shall find that many authors consider its obscurity as arising, in every instance, from the presence of this symptom and others common to pleurisy and peripneumony. Thus Allen judiciously says, "Verisimillimum est medicos interdum hallucinari inflammationem cordis cum peripneumonia confundentes; æquum est enim ut supponamus, cordem inflammatione tentari, secus vix credibile est suppurationes et ul-

* Comment. tom. iii. p. 79.

cera ibidem existere nisi præeunte inflammatione. Dies meliùs docebit."*

Macbride is very positive as to this point. His words are, "The signs of the Carditis are so dubious and equivocal, that it must be next to impossible to say when it is present; so that it will always be confounded with the pleurisy or peripneumony."†

Darwin is of the same opinion with the last-mentioned author, but adds that, "it is attended with constant vomiting."‡

Cullen includes the pneumonic affection in his definition, which

* Syn. art. 560.

† Practice of Physic, p. 435.

‡ Zoonomia, vol. ii. cl. 2—1, 2, 7.

is, "Pyrexia; dolor in regione cordis; anxietas; spiritus difficilis; tussis, pulsus inæqualis; palpitatio; syncope."* In the *First Lines* also he considers inflammation of the heart and pericardium to be always so complicated with pneumonia, as not to require a separate consideration.† But may not incalculable mischief arise from this view of the subject? Suppose a person labouring under inflammation of the heart and pericardium, characterized by pain in the region of that organ, (as I shall hereafter prove to have hap-

* Syn. Nos. Meth. g. 14.

† First Lines on the Practice of Physic, vol. i. p. 409.

pened more than once,) without either cough or difficulty of breathing, which are amongst the principal symptoms of pneumonia; might not the practitioner, who had adopted Dr. Cullen's opinion, neglect to employ those remedies which alone are likely to afford relief? The only symptoms to direct their use would be pain and fever; for which, especially with an unequal pulse, he would not be induced to bleed largely, as long as he overlooked the inflammatory affection of the heart.

Sauvages, in his definition of Carditis, mentions those symptoms only, which might be expected to arise from *a pure inflammation of the heart*, when none of the con-

tiguous parts are affected. He makes a distinction, however, between the symptoms, according as the heart or pericardium happens to be the seat of the inflammation; a distinction, which, as I have remarked in another place, does not appear to be well founded. His definition is less exceptionable than any I have yet seen, and, what is of more consequence, it is followed by a case in point. "CARDITIS.—*Inflammation du Cœur.* Character obscurus anceps deducitur à dolore sub sterno, palpitatione, frequentibus animi deliquiis, pulsûs inæqualitate et frequentiâ, quandoque etiam febre acutâ, sed post aliquot dies accedente cum pulsu duro

et frequenti. Dolores punctorii, anxietates continuæ in regione cordis, videntur assidua symptomata."

"Adolescens dolores acutissimos pungentes in cordis regione, cum anxietatibus et angustiis patiebatur, unde à solitis muniis abstrahebatur, sextâ die febris cum pulsu frequenti et duro invasit; repetitis plebotomiis morbus decimâ quartâ die remisit, sed anxietates et dolores punctorii recrudescentes ægrum 20ma die abstulerunt."

"*Apertura Cadaveris.* Cordis superficies integra pure obvoluta, crustâ pingui vel purulentâ tegente tunicam ejus erosam, pericardium rubrum, vasis turgidis

cinctum, textus carnosus cordis pallidus mollis."*

Sauvages then saw the disease without those symptoms which attend it when the inflammation has spread to the lungs; and notwithstanding his history of the case is not very minute, there would be little difficulty in establishing a diagnosis, if it were always to appear in this form. Macbride, Cullen, and Darwin, on the contrary, never saw it unattended with pneumonic inflammation,—the two first probably not at all; but concluded, from the nature of the parts, that it could not exist separately, and

* Nos. Meth. cl. 3—19.

therefore made those sweeping remarks which too often arise from superficial views of a subject.

Sauvages, and after him, Cullen, make two species of Carditis, viz. *C. spontanea* and *C. traumatica;* which distinction seems unnecessary, as they do not mark any difference in the symptoms. We cannot indeed look for any, except such as may arise from peculiarities in the kind of mechanical injury sustained. This species is not so rare as the former, which it is more particularly my object to consider.

I have to regret that it has not been in my power to procure the Berlin memoirs for 1756, to which Sauvages refers for histories of

Carditis. At the same time it may be doubted whether any thing more satisfactory could be obtained from them, than is to be found in his own work; for, after referring to them, he says, "sed incerta diagnosis prognosis et therapeia nulla efficax." One of them, however, procured through another channel, will be noticed hereafter.

To the symptoms enumerated by Sauvages, and Cullen, Burserius adds "ingentes æstuationes, febrem acutissimam, sitim ardentem, imo ardentiorem, quam in pleuritide et peripneumonia."*—

* Inst. Med. Pract. op. post. c. 4, p. 134, Mediolani, 1789.

Whether he is right will be considered presently. But I must not omit in this place to say he remarks, with much justice, that an inflammation of the lungs, may, from contiguity of parts, spread to the pericardium and heart, and *vice versa;* and thus, according to the particular parts affected, will be the difficulty of breathing, cough, &c.*

* To this reasoning it may be objected, that contiguity of parts does not necessarily communicate inflammation. This holds good generally; for the pleura is sometimes inflamed, while the substance of the lungs escapes; and the peritonæum may be universally inflamed, as in the puerperal fever, while the parietes of the abdomen and the proper coats of the intestines shall not be at all affected: on the other hand, the pre-

Sagar gives the following character:—"CARDITIS, adest dolor constans sub sterno in regione

per coats of the intestines shall become the seat of inflammation, without the peritonæum being affected. But in the cavity of the thorax inflammation is oftener attended with adhesion; and whenever an inflamed part adheres to one that is contiguous, the inflammation will of course extend from one to the other.—The pleura, mediastinum, and outer coat of the pericardium, are all continuations of the same membrane; it is not unphysiological therefore to suppose, that when inflammation appears in one part, it may spread over the whole, even though no adhesion should take place.

In the cavity of the abdomen I have seen the bladder inflamed, and so much thickened by the long-continued irritation of rough and angular calculous concretions, as almost to obliterate the passage through

cordis urens, flammam vitæ extinguens cum palpitatione, frequentibus animi deliquiis, pulsu jam magno, duro per momenta, jam parvo frequente, inæquali, inordinato, intermittente; febre acuta

the rectum, upon which it pressed; yet the inflammation had not extended to any of the neighbouring parts, nor could the smallest appearance of adhesion be discovered. Adhesions, however, the consequence of inflammation of that part of the peritonæum, by which the bladder is partially covered on the outside, are frequently observed between this organ and the rectum or uterus. The bladder, it is well known, becomes thickened without inflammation, in consequence of unusual exertions of its muscular coat; but the whole history of this case proves it to have been frequently in a state of inflammation.

typhode et anxietatibus; cor manu tenentes ægri fugitivis oculis et mille jactationibus agitati sibi comburi illudque mori queruntur, clamant; mei ægri nihil de sanguine extussiebant."* In the above, peripneumonic symptoms are very properly omitted, or rather, *negatively* introduced. He draws a most animated representation of the effects of the anguish that is felt in the heart; and it will appear, from the cases related hereafter, that the colouring is not much too high. He mentions also an epidemic Carditis. "Cl. Trecourt in *Diario Medico* 1755. memorat carditem epide-

* Systema Morborum, pars 2, p. 368.

micam cum symptomatibus peripneumoniæ vehementis, orthopnæa, rara respiratione, siti clamosa, hydrophobia, dolore in regione cordis idem confodente, nausea, palpitatione, pulsu depresso, oculis lacrymosis tristibus, lingua arida nigra, sanguine phrenitico; morbus erat contagiosus, septem die bus terminabatur; anatomia denatorum ostendit cordis substantiam ulcerosam, pericardium cordi accretum."* The above account is far from being satisfactory. Symptoms of a severe peripneumony are mentioned, although there is nothing said of the state of the lungs after death, which

* Systema Morborum, pars 2, p. 369.

we cannot possibly suppose to have been free from inflammation. The disease, moreover, having been epidemic, ought to be referred to peripneumony. There is, at least, every reason to believe that the heart was not the primary seat of inflammation.

Stoll says, " Noscitur, 1. ex signis generalibus febris inflammatoriæ; 2. ex æstu et dolore obtuso, pressivo circa cor, cum anxietate, jactitatione, syncope, pulsu debilissimo, accelerato, vacillante, mire vario. Præceps malum, subinde mihi visum, et secto cadavere demonstratum."*

* Stoll. Aphorismi de cognoscendis et curandis Febribus, p. 81.

The following character from Daniel includes a remarkable symptom, (hydrophobia), mentioned also in the foregoing account of an epidemic Carditis. "CARDITIS. *Phlegmasia Cordis:* dolor punctorius sub sterno; palpitatio cordis; anxietates continuæ; animi deliquia frequentia; pulsus parvi, frequentes, inæquales; pyrexia; aliquando hydrophobia."*

According to Dr. George Fordyce, if the pericardium be inflamed, the symptoms are, "pain deeper seated, and not so much increased on inspiration as in pleuritis:" if the heart be affected, "the pulse becomes small, irre-

* Systema Ægritudinum, p. 111.

gular, and intermitting, with immense anxiety, the patient falls into *syncopes*, and is soon destroyed."*

The late Dr. Gregory mentions, as symptoms of inflammation of the pericardium, "pain in the region of the heart, dyspnœa, great oppression, anxiety, palpitation, irregular pulse, and fainting," though the last symptom (he says) is sometimes wanting.†

Sagar, Stoll, Daniel, and Fordyce have omitted all the symptoms of pneumonia. Dr. Gregory mentions dyspnœa only. Great stress is laid on the smallness and quickness of the pulse, especially by

* Elements of the Practice of Physic, p. 248.

† Elements of the Practice of Physic, sect. 389.

Stoll and Daniel; but its irregularity is added, which does not tally with the cases in this work, any more than the syncope written in the plural number *(syncopes)* by Dr. G. Fordyce. Dr. Gregory, however, admits that syncope is sometimes wanting. If we compare the hydrophobia contained in Daniel's definition, with the ardent thirst in that of Burserius,* we must either consider the symptoms as being uncommonly diversified, or doubt the accuracy of those authors. These very opposite symptoms are mentioned by them only, if we except the former by Trecourt in his acccount of an

* Inst. Med. Pract. loco citato.

epidemic Carditis,* from whom probably Daniel copied it.

In Bang's "*Selecta Diarii Nosocomii regii Fridericiani Hafniensis*" are three cases which he refers to Carditis. As this work is not in every person's hands, and what the author has written in another place being extremely liable to criticism, when compared with the cases from which it is professedly an induction, it will be necessary to transcribe them; for I cannot, in justice to a distinguished systematic writer, pronounce a verdict against him, without laying before my readers the evidence on which it is founded.

* Sagar. Systema Morborum, loco citato.

Diar. 1783. *Feb. n.* 4.—" Fæminam 26 annorum febre continuâ jam octiduo laborantem cum oppressione medii pectoris, tussi, sputo quandoque sanguineo, dyspnœa insigni, pulsuque tenso, curare studui quinquies mittendo sanguinem, qui erat phlogisticus, camphoratis, vesicatorio in pectore; morbus tamen increvit cum intolerabili situ in dorso; et demum biduo ante mortem, quæ diem morbi decimum octavum finivit, reliquis symptomatibus junctus erat dolor pectoris sinistri. Aperto abdomine, cujus dolor haud adfuerat, invenimus intestina tenuia passim inflammata et glandulas mesenterii induratas; ambæ thoracis cavitates largam seri co-

piam continebant, pulmo sinister erat inflammatus; ventriculus cordis sinistri etiam inflammatione læsus videbatur, dexter autem crusta alba puriformi obductus. Cardititem hanc vivente ægrota me ignorasse nec quidem suspicatam fuisse sponte profiteor, vix tamen ideo rite neglecta fuit medela, utpote quæ magis gradui quam sedi inflammationis accommodari debet. Collectum in pectore serum merito inflammationis effectus habendum est, partim ex irritatione et constrictione vasorum resorbentium, vel forsan potius ex impedita sanguinis circulatione in vasis inflammatis, ejusdemque ideo majori affluxu ad vasa exhalantia derivandum."

Diar. 1784. *Octobr. n.* 6.—
" Scabie per unguentum a mercurio præcipitato rubro paratum exsiccata, vir 26 annorum mox sentiit dyspnœam, jam tribus septimanis durantem sat notabilem cum raucedine, tussi sicca molesta, tumore œdematoso unius cruris, et reliquo corpore emaciato; quæcunque ad scabiem revocandam adhibita remedia frustranea erant, verum allata symptomata increverunt, tussis demum reddebatur humida cum sputo partim sanguineo, partim purulento, intercurrenteque vomitu, his tumores hæmorrhoidales valde dolentes etiam jungebantur, extremitates inferiores magis magisque intumuerunt, inquietudo et anxietas erant nota-

biles ægrotum ad situm erectum cogentes, quibus miseriis ad summum gradum provectis advenit optata mors. In aperto cadaveris abdomine inveniebantur, serum nonnullum spissum flavescens, omnia intestina tam tenuia quam crassa admodum contracta, imprimis colon transversum, tenuia præterea passim inflammata, hepar solito durius, imprimis illius lobus dexter, vasa mesorecti solito magis turgida et conspicua, atque ipsius hujus intestini tunicæ rubræ; pectoris cavitas sinistra serum largum spissum flavescens continebat, pulmo ipse inflammatus erat; pulmo dexter costis ubique per filamenta membranacea firmiter annexus, ejusque substantia multis

et magnis tuberculis schirrosis erat conferta; pericardium reperiebatur sero flavescenti viscido impletum ejusque interna superficies inflammata, cor ipsius magnum et inflammatum, imprimis ventriculus dexter. Similitudo liquoris in cavitatibus cadaveris reperti cum materia in pustulis scabiosis contenta fere extra dubium ponit hanc ipsam fuisse, quæ post retrogressum topico mercuriali effectum apud partes internas deposita inveniebatur, quæque vi acrimoniæ et spissitudinis reliquas detectas viscerum læsiones, tam obstructionem, quam inflammationem non poterat non procreare; indurationi autem hepatis sine dubio ex eadem causa ortæ plenitu-

dinem vasorum hæmorrhoidalium, eorumque tumores molestos adscribere fas est."

N. 7.. "Dolore cardiæ et medii pectoris constanti admodum gravi, ad dorsum extenso, ab ingestis insigniter increscenti cum respiratione difficillima, decubitu horizontali impossibili jam novem diebus laboraverat puella 13 annorum, ob summos cruciatus et inquietudinem difficulter allata morbi symptomata indicare valens; de causa ejusdem nihil nobis cognitum reddebatur, pulsum inveni celerem, tensum, alvumque rite apertam; quinque adhuc diebus in nosocomio vixit hæc misera cum indesinente lamentatione inquietudine et dyspnœa ad letalem

demum gradum adaucta. Aperto defuncti abdomine, totum hepar solito magis rubrum et durum inveniebatur, quoad superficiem convexam crusta tenui mucosa obductum, et mediante illa diaphragmati agglutinatum, incisa ejusdem substantia largum sanguinem fluidum fundebat; glandulæ mesenterii erant induratæ; in thorace cellulæ mediastini anterioris serum spissum multum continebant, ambo pulmones intermediis crassis, numerosis filamentis membranaceis tam firmiter ad costas accreti, ut sine substantiæ dilaceratione separatio non fieri posset, in posteriore parte utriusque cavitatis serum largum sanguineum continebatur, pulmones ipsi erant ob-

scure rubri; pericardium in tota circumferentia cordi erat continuum, et tam arcte annexum, ut nullibi absque læsione cordis separari potuerit, membranæ hujus involucri etiam solito crassiores erant. Haud mirum est enormem hanc ipsorum vitalium viscerum læsionem maximos, quos nostra patiebatur, cruciatus intulisse; imprimis autem anxietatis insignis gradus, et in præsenti et prægresso ægroto observatus, cordi ipsi, apud utrumque afflicto, imputandus est, ideoque in posterum sub concursu similium symptomatum pro signo vix incerto talis causæ mihi inserviet."

In the two first of the foregoing cases cough is noticed as a

leading symptom; whereas, in another work, he considers the absence of this symptom to be of so much importance, as to introduce it into his definition of the disease.—"Symptomata et signa præter febrilia communia sunt dolor in regione cordis, pulsus intermittens, anxietas, palpitatio, tussis nulla."* There is a want of agreement also between the symptoms in the third case and the nosological character. In the case the pulse is noticed as being quick and tense only, whereas in the character we have "pulsus intermittens." Palpitation is likewise introduced, but there is no mention made of this

* Praxis Medica, p. 181.

symptom in either of the cases. There is difficulty also in conceiving so much disorder of the lungs to have existed in the last case without cough. The cases are all evidently too complicated to be refered to Carditis exclusively.

In addition to these, there is a short account of a case which was treated as an inflammation of the heart, and terminated favourably after seven bleedings. *Diar.* 1786. *Jul. no.* 5. The only symptoms enumerated, are, pain in the region of the heart, debility, a hard pulse with remarkable intermissions, and slight dry cough.

Notwithstanding the *Praxis Medica* of Bang is professedly

illustrated by the cases in the *Diary*, he seems not to have paid the least attention to them, in forming his nosological characters. Thus, the intermitting pulse, which appears in the character of Carditis, was not observed in either of the cases in which dissection proved the heart to have been inflamed; and cough, the absence of which he deems essential, occurred in two cases out of three. Errors of this description are, I fear, too common in systematic and nosological writers to excite much surprize.

Many histories of inflammation in the lungs and pleura, extending to the mediastinum, pericardium, and heart, are to be

found in authors.* In them the symptoms will always be complicated: they are not, therefore, to the purpose, my object being to collect those symptoms only which appear when the inflammation is confined to the heart and pericardium.

It seems proper to consider the inflammation of the heart and pericardium as only one disease; notwithstanding some authors have made them distinct affections. Sauvages, whose definition of Carditis has been already noticed, ranks

* Riverius. Obs. Med. cent. 1, obs. 87; Huxham's Essay on Fevers, p. 239; Ant. de Haen. Ratio Medendi, vol. iv. p. 140; Stoll. Pars septima Rationis Medendi, sect. 2, hist. 8.

the inflammation of the pericardium, as a species of Pleuritis, under the name of Pleuritis Pericardii.* Selle preserves the distinction without any reference to the pleura. His definition of the inflammation of the pericardium is, "Dolor punctorius ac gravitas in pectoris parte profundiore: anxietas: palpitatio cordis: perpetua ad tussiendum proclivitas."†—He adds, "Haud raro accidit ut plurium partium inflammationes simul coexistunt, pro cujus complicationis diversitate alia atque

* Nos. Meth. cl. 3—13, 4.

† Daniel makes this distinction also, and gives precisely the same character of the inflammation of the pericardium as Selle. Systema Ægritudinum, p. 102.

alia phenomena adparent, quorum determinatio sat difficilis est."* According to him, *the inflammation of the heart* is distinguished from *that of the pericardium*, by the absence of the disposition to cough in the former, the definition of which is, "Dolor punctorius sub sterno: palpitatio cordis et anxietates continuæ: pulsus parvus inæqualis: calor exiguus."†

Whether these different affections can ever be distinguished in practice seems very doubtful; their separate existence must, however, be admitted, of which one of the cases to be related presently af-

* Pyretologiæ Rudimenta Methodicæ, p. 119.

† Ibidem, p. 126.

fords proof, if that were wanting. Dr. Baillie also has seen the substance of the heart inflamed, without any inflammation of the pericardium; and although he says, "whenever the inflammation of the pericardium is violent, the muscular substance of the heart is inflamed to some depth," he does not deny that in slighter inflammation of this membrane the heart may escape.* According to him, the symptoms which have been observed, are, "the general affection of the system known by the name of fever; pain in the region of the heart, which is often, but not always, attended with palpita-

* Morbid Anatomy, c. 1 and 2.

tions, and with an irregular pulse; cough; difficulty of breathing; and sometimes syncope." Notwithstanding the high authority from which this decription proceeds, it must be allowed to be very unsatisfactory. Nearly all the symptoms, supposed to be present in every case, are common to peripneumony; so that there is scarcely one by which the inflammation of the heart can be distinguished. At the same time it cannot be denied, that this arises more from the difficulty of the subject, than from any neglect or inability of that excellent pathologist.

Since then Carditis is so often connected with peripneumony, and since the symptoms which

more immediately arise from inflammation of the heart, as palpitation, syncope, &c. are not always present; it will, perhaps, be impossible to establish a diagnosis upon solid principles. But let not the obscurity, in which the subject is involved, deter us from attempting its elucidation. Let it rather call forth our greatest exertions; and if we recollect that there was a time, when that formidable disease, denominated Croup, was as imperfectly known, and as little under our control, as Carditis is at present, we shall not want encouragement to proceed.

Under this impression, I have endeavoured to ascertain what have been the opinions and obser-

vations of systematic writers, and others, respecting the inflammation of the heart and pericardium. In other words, I have endeavoured to lay before my readers whatever is known conçerning it,* before I draw their attention to three cases, the first of which happened in the extensive practice of Dr. Haygarth, and has been obligingly communicated by him. For the particulars of the second

* "Non in humani profecto ingenii acumine sita est ars præstantissima, quam diligens, accurata, et sagax notatio naturæ, atque animadversio peperit; sed potius variis cujusque ætatis doctorum laboribus coacervata sapientia dicenda est, hominumque multorum mens in unum quasi collecta."—Baglivi Prax. Med. l. 1, c. 1.

I am indebted to Dr. Boisragon, and Mr. Tudor. The third fell under my own observation, and appeared too important to be suffered to remain unrecorded.—It is to be regretted, that, my patient being at a considerable distance from Bath, I had not more frequent opportunities of seeing her, especially at the commencement of the disorder; but her father, who is a medical gentleman, has furnished me with an accurate account of all the symptoms which occurred during the whole course of her illness. His report has been confirmed by the testimony of a neighbouring practitioner, who attended twice, and performed the dissection in my presence.

SECTION III.

Cases of CARDITIS, *illustrated by Dissections.*

CASE I.

MASTER W. æt. 7.—Jan. 22, 1785. After having complained of head-ach for a month, was attacked, four days ago, with fever. He had danced on the day preceding this attack. Pulse 140. There is wandering pain affecting sometimes the head, sometimes the leg, and, at others, the heel.

He has taken thirteen grains of James's Powder in three doses, and a grain of Emetic Tartar in four doses, without vomiting.

Capiat Pulv. Antim. Jac. g^{r}v. horis 2 d^{is}, ter, cum Mist. camph. efferv.

Jan. 23. P. 124, and strong. Slept now and then during the night. Acute pain of the ankle; scarcely any of the head. Three stools. Neither nausea nor perspiration from 28 grains of the Powder in six doses.

V. S. ad ℥vij. Capiat Pulv. Antim. Jac. g^{r} v. horis 3^{tiis}, cum haustu ex Jul. camph. ℥fs, Sp. Minder. ʒij.

Jan. 24. The blood drawn exhibits a highly inflammatory crust. Bowels have been twice moved by a Cathartic, and he has taken 25 grains of the Powder, without nausea, vomiting, or per-

spiration. P. 112—120. The pain of the head is abated. Sleeps occasionally.

Capiat haustum ex Sp. Minder, Syr. Aurant. āā ʒij, Vin. Antim. g^{tt} xx. 4^{tis} horis.

Jan. 25. P. 156. Pain of the head, epigastrium, left side of the chest, and leg. Five stools from the same Cathartic, and four ounces more of blood have been drawn.

Fiat V. S. tertia ad ℥vij. (antea ad ℥vij. et ℥iv.) Capiat Nitri g^{r} x. horis 3^{tiis}. Vesicatorium Epigastrio.

Jan. 26. There is a very thick and hard crust on the blood in both cups. Slept quietly several times in the course of the night. P. 136. Delirium in the even-

ing, after he awoke; none in the morning.

Rep^{r} Mist. cathart. V. S. et dein Nitri g^{r} x. horis 3^{tiis}.

7. p. m. Six ounces of blood were drawn,[e] which nearly occasioned syncope. The blood has a crust one fourth of an inch thick. The symptoms are greatly relieved, but the pulse is now 126. Three stools. Sleeps frequently without any delirium.

Capiat Nitri g^{r} x. horis 3^{tiis}. Potus imperialis, &c. copiose.

Jan. 27, h. 7ma. a. m. P. 90—108. Sleeps much.

Capiat Haust. efferv.

Jan. 28, h. 6ta. p. m. Acute pain in the left mamma. Is seldom hot. Sleeps frequently, and

moans while awake. Eats sparingly. Has taken the cathartic Mixture without effect.

Inj[r] Enema. Admoveantur Hirudines sex loco dolenti. Cap[t] Nitri g[r] x. horis 3[tiis].

Jan. 29. Slept well during the night. A copious stool from the Clyster. Pain of the thorax much relieved. P. 120.

Si dolor fixus, admoveantur Hirudines; si vagus, descendat in Balneum. Rep[r] Mist. cathart. et post dejectiones capiat Nitri g[r] x. horis 3[tiis].

Jan. 30. P. 126. Fingers cold. Wandering pain of the head, side, abdomen, hip, and leg. Two stools. Moaning.

Habeat Jul. camph. ℥iiſs, Sp. Minder. ℥iſs, Vin. Antim. g^{tt} xxv. horis 4^{tis}. Vesicatoria pone aures. Balneum.

Jan. 31. Slept often during the night. P. 126. Heat natural. Moaning. The Bath afforded little relief. Wandering pain of head, abdomen, and leg. Urine turbid.

Capiat Infus. Cort. Per. ℥j. horis 2^{dis} et Rhei g^{r} v. bis.

Jan. 31, h. xi. p. m. Took five ounces of the Infusion, and food twice or three times. Better during the day, but is moaning at present. P. 126. Feet and hands cold. Delirium. Wandering pain of the head and abdomen.

Inj^{r} Enema.

Feb. 1, h. 8va a. m. P. 126. Heat natural; but, not long ago, the extremities were nearly cold. Has taken the Infusion twice, and some wine and water. Delirium. Moaned and was quiet alternately during the night. Face pale. Swallows with difficulty. Urine deposits a copious white sediment.

Capiat Infus. Cort. Per.

Feb. 2. A very restless night, but slept from seven o'clock this morning till one in the afternoon. Symptoms relieved. P. 124. Has taken butter-milk, bread, and wine and water. At four in the morning he took a draught with twenty-five drops of Antimonial Wine and five of Laudanum, and at nine o'clock ten drops of Laudanum.

Feb. 2, h. 4½ p. m. Died quietly.

DISSECTION.

The pericardium was very much inflamed; its external coat much redder and thicker than natural. The internal surface of the pericardium, and external surface of the heart, were much more changed by inflammation; their smooth shining and slippery membranes were rendered rough and unequal; purulent matter covered both surfaces; they were connected by several firm adhesions, and some irregular membranous fragments lay loose in the cavity.* The muscular substance of the heart was not diseased.

* This is, perhaps, the more usual appearance of adhesion between the heart and pericardium. In a case of inflammation of

The arteries, veins, and sinuses of the dura and pia mater, were

the heart from external injury, lately seen at St. Bartholomew's hospital, the adhesions were partial; and, where deficient, membranous bands, attached either to the heart or pericardium, floated in the cavity. In some parts these were the means of union between the heart and pericardium. Examples of this sort are not rare in collections of morbid anatomy.——Dr. Baillie accounts for this kind of adhesion by supposing, that, where it exists, the inflammation has been of older date, so that time has been given for the adhesions to be elongated by the motion of the heart. MORBID ANATOMY, chap. 1. The histories of cases, however, render this very doubtful. There does not appear to have been sufficient time for such a change in the present instance, the patient having survived the accident only a fortnight. Besides, the membranous bands, constituting the elongated adhesions, are not always attached

turgid with blood, but those membranes did not appear inflamed. The frontal veins and arteries, where the pain was chiefly seated, were less turgid than those of the vertex and occiput. There were about 2 or 3 drachms of serum in the ventricles of the brain. There was no other morbid appearance in the brain, thorax, or abdomen.

The history of the disorder afforded no suspicion that the heart or pericardium were attacked, till the 7th day of the fever. A third and fourth bleeding seemed to subdue this inflammation for a few days, but it returned on the tenth.

both to the heart and pericardium, but, sometimes, to one of them only, the loose end floating in the cavity of the pericardium.

CASE II.

Miss H. C. sixteen years of age, of a remarkably full habit, while under Mr. Tudor's treatment for inflamed and enlarged tonsils, (to which she had occasionally been subject, and which, on this occasion, appeared after dancing,) took cold, and was attacked with inflammation in her feet and ankles. This suddenly disappeared, and hysterical symptoms supervened, attended with delirium, which induced Mr. Tudor to take away twelve ounces of blood. When Dr. Boisragon first saw her, several days before she died, the symptoms were, general spasm and continual agitation of the body, watchful-

ness, outrageous talking and singing in a maniacal manner. Pulse 120, hard and full. The hardness and fulness of the pulse diminished after the loss of twelve ounces of blood by a second bleeding; and, the fox-glove having been administered, it was once observed to be slightly intermitting. It afterwards increased to 136, and was firm, but not hard. Bleeding from the temporal artery was proposed, but she expired while preparation was making for the operation. She had not slept during nine days, nor was there any abatement of the delirium before death.

She was twice bled, with evident remission of all the symptoms, especially after the first

bleeding. Sinapisms were applied to the feet, and blisters to the calves of the legs, without relief: other means were employed; but, as, from the obscure nature of the complaint, it was impossible that they could be in conformity with any precise indications of cure, it is unnecessary to mention them in this place.

The violence and permanency of the delirium prevented any distinct expression of this young lady's feelings; she was once, however, heard to exclaim, "Oh, my heart, I wish it would burst!" But this was regarded merely as delirious raving. No cough, nor any other symptom of pneumonic inflammation, occurred at any

period of her illness. There had always been a tendency towards great vascular action; for she menstruated as early as eleven years, and was subject to hysteria. A lumbricus was passed during the complaint, but no more were discovered on dissection, although search was made for them.

DISSECTION.

On opening the head, the brain appeared to be very little, if at all, diseased. The vessels running through the medullary substance of the cerebrum were slightly distended, but there was no appearance of inflammation in either the dura or pia mater. There was an increased redness and vascularity

of the corpus callosum, without any unusual quantity of fluid in the ventricles.

On raising the sternum, the lungs appeared extremely red, and full of grumous blood; but there was no inflammation of those parts.* The external aspect of the heart was natural, and the usual quantity of fluid was found in the pericardium. On cutting longitudinally from the apex to the base of the heart, very decided marks of inflammation were observed over the whole internal surface of the right ventricle, and to a slighter degree in the other.

* This appearance of the lungs in Carditis has been observed by Meckel. Commentarii de Rebus, vol. vii. p. 703.

The columnæ carneæ, and tricuspid valves, were greatly inflamed. The inflamed parts were covered with a layer of extravasated matter, resembling the coagulable lymph of the blood.* Marks of inflammation were also perceived on the upper surface of the diaphragm, and about the cardiac orifice of the stomach.

* This matter is frequently observed upon the inner surface of the pericardium, and upon that part of it which is the immediate covering of the heart, when the pericardium has been inflamed. It is admirably represented in one of Dr. Baillie's splendid engravings of morbid appearances.

CASE III.

Miss A. twelve years of age, complained, during the first week, of pain under the sternum, in the left shoulder, and at the upper and inner part of each instep. The pain in the insteps lasted ten days, and was so violent, from the third to the tenth day, as to prevent walking, for the performance of which she was not disqualified by the severity of the other symptoms. On the eighth day there was difficulty of breathing, and palpitation; which last symptom became so extremely violent in the more advanced stage of the disease, that the whole chest seemed in motion; and the imme-

diate action of the heart was compared to a hard body grinding against the ribs. After the first ten days the pain in the insteps and shoulder was no longer felt, while that under the sternum became extremely severe, and extended to the left side. Notwithstanding the difficulty of breathing increased after this period, and was attended with a slight cough, there were occasional remissions of it and of the pain, especially after opiates, which were administered from an opinion of the spasmodic nature of the complaint. The pulse was small and quick, seldom beneath 130, never unequal nor intermitting, except occasionally during

sleep. Skin in general only moderately warm, but great heats* with perspiration, occasioned by the extreme anguish which she felt in the region of the heart, frequently took place. Screaming, and the most violent jactitation of the body, were also produced by it. Tongue clean and moist till towards the last, when it became whitish. There was considerable thirst. Urine rather high-coloured; and it was remarked that some, passed ten days before death, after standing a few hours, deposited a sediment, and appeared milky on being shaken. Bowels rather costive, but stools were

* "Ingentes æstuationes." Burserius. loc. cit. et Schenckius. lib. 1, De Mediastino.

often procured by means of common cathartic medicines. Vomiting commenced five days before death, and continued to the end. Syncope never occurred. Towards the close of the scene there was some pain in the region of the liver. She was perfectly sensible throughout, there being not the slightest affection of the head. The disorder lasted 26 days.

She generally leaned forwards, with an inclination towards the left side, and did so even while in bed, placing a pillow against her heart.* She could, however,

* This circumstance and the exclamation of Miss H. C. correspond with a remarkable symptom in Sagar's definition,—"Cor manu tenentes," &c. p. 37.

lie down during the remissions of difficult respiration, though not on the left side. Sometimes she could not bear the least pressure upon the region of the heart.

Two bleedings were employed, without relief, one on the eighth and another on the eighteenth day. The blood drawn exhibited an inflamed crust.

Previous to this illness she had been a very healthy girl, having had no particular indisposition, except inflamed tonsils, to which she was occasionally subject. A lumbricus was voided in the early stage of the complaint.

DISSECTION.

The pericardium was very much inflamed and thickened. It ad-

hered to the pleura. The tendinous part of the diaphragm, to which the pericardium naturally adheres, was also the seat of inflammation. The muscular substance of the heart, likewise, was inflamed to some depth, and the firmest adhesion had every where taken place between it and the pericardium, presenting that appearance which has sometimes led anatomists to pronounce the pericardium wanting.* The heart appeared to be enlarged, and was pale and flaccid internally. Large

* It must not be supposed that I consider this *lusus* as never having taken place. Haller denied its existence. Baillie has demonstrated it. Medical and Chirurgical Transactions, vol. i. p. 91.

masses of coagulated lymph were found about the auricles and origin of the large vessels. The lungs on the left side were considerably inflamed, adhering to the pleura. The liver was large, and of a very deep colour from turgidity of its vessels. The gall-bladder was quite full of dark green bile. The principal vessels upon the surface of the stomach and intestines were very much distended with blood, but there was no actual inflammation of those parts.

The head having always been free from complaint was not examined.

SECTION

SECTION IV.

Conclusions from the foregoing Cases.

IN the view which I purpose to take of the foregoing cases it is my intention to distinguish, as much as possible, between the essential and secondary symptoms of the disorder. This will be no easy matter, nor will the result be so satisfactory as I could wish. The essential symptoms are very few; nay, it may be questioned whether there be one that is truly pathognomonic.

It must have occurred to my readers, that none of the authors,

who have described the symptoms which attend Carditis, have been sufficiently attentive in making this distinction; a circumstance of the utmost consequence, as it appears to have, not only different, but a greater number of symptoms in one case than it has in another. The same happens, indeed, with respect to many other diseases, but I am not acquainted with any in which it is so remarkable as in this. From not attending to the above distinction, authors have frequently mentioned secondary symptoms as if they were essential or pathognomonic.

The *anguish that is felt in the region of the heart* appears to be more characteristick of Carditis

than any other symptom, and may justly be denominated essential. Nothing equal to it ever takes place in any of the organic diseases of the heart, nor in any of the varieties of pneumonia. In the last disease, moreover, it is always attended with cough, dyspnœa, &c. It is very properly noticed by Sauvages in the following emphatic words, "dolores punctorii, anxietates continuæ in regione cordis." The figurative language of Sagar is not, perhaps, too strong to express what is felt in this disease—"Cor manu tenentes ægri fugitivis oculis et mille jactationibus agitati sibi comburi illudque mori queruntur, clamant.*

* See definition, p. 37.

Dr. Cullen's "dolor in regione cordis" is certainly not expressive enough. Bang, from what happened in his cases, is inclined to regard it as a sure sign of the heart being inflamed.*

But it may be said that pain and inflammation are not convertible terms; or, in other words, that pain does not necessarily imply inflammation, even in so important an organ. There is severe pain, not arising from inflammation, in the paroxysms of Angina Pectoris. Besides, pain from inflammation has not, in general, such remissions as were observed in the case of Miss A. In answer to these objections, it

* Loc. cit.

may be stated, that the pain felt in the paroxysms of Angina Pectoris can never be confounded with the extreme anguish arising from acute inflammation of the heart. It is not only less violent, but many symptoms, which are essential to the former, never occur in the latter. And although some ambiguity may arise from the remissions of pain which took place in the case of Miss A. I think we shall in general act right, if we consider severe pain in such an important organ as being connected with, or liable to produce, inflammation, whether it have remissions or not.* The pain is

* It will, perhaps, be questioned whether a practitioner might be justified in bleeding

not mentioned as having been extremely severe in Master W.'s case; but there it was, probably, moderated by a more early use of bloodletting than was employed in the other cases. We may infer its violence in the case of Miss H. C. from the very strong expression of anguish, which, once only, she was heard to utter.

The secondary symptoms are very numerous, and consist of *fever*, *palpitation*, *irregular pulse*, *cough*, *difficulty of breathing*, *delirium*, *syncope*, *vomiting*, and, perhaps, *wandering pain in various parts of the body.*

to the utmost extent, if extreme anguish in the region of the heart were the only symptom of inflammation. I think he might.

Notwithstanding *fever* must be admitted into the list of secondary symptoms, it could scarcely be said to exist in the case of Miss A. The heat of her skin was never preternaturally great, except when the anguish which she felt occasioned profuse perspiration.* She had some thirst, but the tongue was generally clean and moist. The pulse was frequent, but by no means strong or full at any period of the disorder. The only marks, then, of the presence of fever, were, thirst, and quickness of the pulse; and these must be allowed to be rather

* This accords with the "calor exiguus" of Selle in his definition of *Inflammatio Cordis*. Pyret. Rud. Meth. loc. cit.

equivocal. Chills, succeeded by heats, are reckoned amongst the diagnostick signs of deep-seated inflammation. Thus, we have shiverings and flushing when the kidneys are inflamed from a stone—a bowel from strangulation—or the gums from a carious tooth: this order of things, however, was not observed in the cases under consideration. Is it not astonishing, that an acute inflammation of the most important of all our organs should not be attended with so much fever as a common gum-boil! This is one amongst the many secrets in the animal œconomy which remain to be explained.

The feeble action of the heart in Carditis is a circumstance which

did not escape Sauvages, who says, "In carditide et gastritide febris quoad calorem et pulsus vim exigua, rara, vel nulla."* Selle, Sagar, Stoll, Daniel, Fordyce, &c. have also mentioned this state of the pulse, as may be seen by referring to their definitions already quoted. Lower explains the feeble action of the heart, when under inflammation, in the following satisfactory manner: "Si enim cordis parenchyma, aut nimia pinguedine oneretur, aut inflammatione, ulcere, abscessu, aut vulnere laboret, adeo ut sine magna molestia atque difficultate aut absque gravi offensa sese vibrare et contrahere non possit; motum suum valde remit-

* Nos. Meth. loc. cit.

tit, et sanguinem quantum potest, licet non quanto opus est reliquo corpori distribuit; unde sanguinis quoque motus debilis admodum et languidùs existit."* A case in Morgagni shows, that an inflammation of the heart and pericardium may exist without any well-marked symptoms of fever.†

That *palpitation* does not always take place in Carditis I cannot say from my own experience, as it was present to a very remarkable degree in the case of Miss A. Dr. Baillie says that it does not;‡ and,

* Tractatus de Corde, cap. 2, p. 97.

† De Sedibus Causisque Morborum, epist. 24, art. 2.

‡ Morbid Anatomy, c. 1.

from some cases of adhesion between the heart and pericardium related by Morgagni and Lieutaud, in which this symptom was not observed, either during, or subsequent to the period, when the adhesion was supposed to have been formed,* it is probably often absent. But it is unnecessary to refer to those pathologists for evidence of the absence of palpitation, since it was not observed in the cases of Master W. and Miss H. C. In the case of Miss A. the

* Morgagni de Sedibus Causisque Morborum, epist. 4, art. 19, 20; epist. 5, art. 19, et seq.; epist. 8, art. 6, 7; epist. 22, art. 4, 5, 10, 11; epist. 24, art. 11; epist. 35, art. 12.—Lieutaud. Hist. Anat. Med. lib. 2, obs. 695, 696, 697, 699, 701, 702.

palpitation might be supposed to have arisen from the adhesion between the heart and pericardium, and not merely from the inflammation of those parts; as it is probable that the adhesion was closer in this instance, than in those alluded to by Morgagni and Lieutaud. When it is by means of membranous elongations, we can readily admit palpitation to be wanting, as the heart will then have sufficient room for its ordinary action.

While so many instances of adhesion between the heart and pericardium, unattended with palpitation, and some of them without any complaint whatever, are recorded by Morgagni; it must

not be supposed that he never observed this symptom co-existent with such a morbid condition of the heart. On the contrary, he mentions an adhesion of the pericardium to the heart, right auricle, and large vessels; in which case there was an irregular pulse, and palpitation.* In Bonetus, also, we meet with an adhesion of the pericardium to the heart, which is stated to have produced palpitation.† Lieutaud gives three similar cases from Senac, attended with palpitation and dyspnœa.‡ Dr. Baillie says, " it is worthy of

* Epist. 30, art. 7.

† Lib. 2, sect. 8, obs. 20.

‡ Lib. 2, obs. 698, c—e, et obs. 702.

remark, that where there is an adhesion of the pericardium to the heart, the latter sometimes pulsates so violently, that it is impossible to distinguish it from the pulsation of an aneurism."*

Irregularity of the pulse is so generally mentioned among the symptoms of Carditis, that I do not think myself authorized in rejecting it, notwithstanding it was not observed in the cases which have given rise to this work; except once in that of Miss H. C. soon after the exhibition of fox-glove.†

* Morbid Anatomy, c. 1.

† In a case of Carditis from external injury, lately brought to St. Bartholomew's hospital, the pulse was not irregular, as I have been informed by a gentleman who watched the symptoms attentively.

There is no difficulty in considering *cough* and *dyspnœa* as secondary symptoms, since they manifestly arise from an extension of the inflammation to the lungs and pleura. Senac, however, says that when the pericardium is inflamed, respiration cannot be free, on account of its contiguity to the lungs.* In the case of Master W. both surfaces of the pericardium were highly inflamed, without either cough or dyspnœa. These symptoms cannot, therefore, be considered as essential to any variety of the disease.

Delirium, which is not to be found among the symptoms of Carditis in any author whom I

* Traité du Cœur, t. ii. p. 348.

have consulted, occurred in two of the foregoing cases. I call it delirium only, and place it in the catalogue of secondary symptoms; for although during the lives of the patients there was strong suspicion of phrenitis, the brain was not observed, upon dissection, to have been inflamed. This symptom affords a very important circumstance in the history of Carditis; for, in both the cases in which it happened, the brain was considered to be the principal seat of the disorder. Had we known only Dr. Boisragon's case and dissection, we might perhaps have attributed the delirium to the inflammation of the diaphragm, and referred the case to the para-

phrenitis of Boërhaave; but in the case of Miss A. the diaphragm was so much inflamed, that the natural adhesion between it and the pericardium became greatly extended: yet she had never been delirious even for a moment.— In Dr. Haygarth's patient this symptom appears to have kept a middle state; as it occurred twice in the course of the complaint, being neither permanent nor of great violence.*

Upon an attentive perusal of the cases and dissections, some persons may object to the foegoing conclusion. The red colour of an

* The diaphragm was not inflamed in this case.

inflamed portion of the brain is never very intense; and when the dura mater is inflamed, it does not appear so much crowded with vessels, as other parts which are naturally more vascular. It is also more difficult to distinguish inflammation in the pia mater, than in any other part of the body. This depends upon the great number of very small vessels which ramify upon it in its healthy state.* Besides, Bichat has remarked, that *in acute inflammation membranes soon lose their redness.*† However true all this may be, the gentlemen,

* See Dr. Baillie's Morbid Anatomy, chap. 24.

† Anatomie Generale par Xavier Bichat, tome ii. p. 491.

to whom I am indebted for the cases, being well acquainted with the natural appearance of the parts, could not have allowed any difference arising from disease to escape them; and no person is justified in concluding that inflammation has been where no traces of it are to be found.—Dr. Haygarth mentions a turgid state of the arteries, veins, and sinuses of the dura and pia mater, in his case, from which delirium might be supposed to have arisen; but no such appearance is noticed by Dr. Boisragon and Mr. Tudor, although a higher degree of delirium prevailed in their patient. They mention, indeed, a slight distension of the vessels in the

medullary substance of the brain, and an increased redness and vascularity of the corpus callosum; but these cannot be deemed sufficient to account for the symptoms. I am, therefore, inclined to believe, with them, that *the delirium was occasioned by the affection of the heart*, and that the trifling deviations from a natural state in the vessels of the brain and its membranes, are to be considered as an effect rather than a cause of this symptom.—The slight distension of the blood-vessels of the brain and its membranes, observed in these cases, cannot be considered even as an effect of inflammation; the distended vessels of an inflamed part being the capillaries, which

do not in their natural state contain blood. The larger vessels of an inflamed part have their action increased; and increased action and distension are incompatible with each other.*

* Increased action of the larger vessels of an inflamed part, or the *vis a tergo* of Boërhaave, and the præternatural distension of the capillaries, are consequences only of inflammation. The cause has been conjectured in another place. See page 7.

Inflammation has occurred when the *vis a tergo* must have been previously diminished, as in that remarkable case related by Mr Abernethy in the first volume of his Surgical Observations, in which the brain became inflamed, after the supply of blood by one of the carotid arteries had been cut off in consequence of mechanical injury.

It is generally supposed, that, wherever inflammation takes place, there is an in-

In what manner, then, shall we explain *delirium* as a symptom of Carditis? It cannot well be

creased impetus of the blood in the capillary vessels of the part affected; and obstruction, or spasm, affecting their extremities, have been assumed to explain the phenomena. Actual observation, however, proves the action of the capillary vessels of an inflamed part to be diminished. This doctrine is not entirely new, as traces of it are to be found in several authors. It was, I believe, first stated in a methodical form by Dr. Lubbock and Mr. Allen, about twenty years ago, in discussions which took place, at that time, in the Royal Medical Society of Edinburgh. In the year 1796 I assisted Dr. Magrane, then my friend and fellow-student at Edinburgh, in some experiments, which it would be foreign to the object of the present inquiry to relate, but which fully convinced us of the truth of their opinion.

attributed to any known sympathy between the brain and the heart. Compression of the brain diminishes the force and activity of the heart, and an impeded action of the heart occasions vertigo and syncope. Its accelerated motion gives rise to watchfulness and rapidity of thought, but can hardly be deemed sufficient to have produced delirium in these cases. Is it owing to the anguish that is felt in the region of the heart? We know that violent pain will produce it in some constitutions.

From the nature of the organ which is the seat of inflammation, it might not unreasonably be expected that *syncope* should happen in almost every case. It is included

in the enumeration of symptoms which Dr. Freind has taken from Avenzoar, Salius Diversus, and Roudeletius. It is mentioned by Bonetus, Lieutaud, and Van Swieten; and Sauvages, Sagar, Stoll, Daniel, Cullen, Fordyce, &c. have introduced it in their definitions.* Dr. Baillie, however, says that it *sometimes* attends the inflammation of the heart and pericardium. The late Dr. Gregory observes that it is *sometimes* wanting. Frank speaks of an inflammation of the large arteries, without either syn-

* This symptom has also been observed in adhesions between the heart and pericardium, when inflammation was not present. Lower. Tractatus de Corde, cap. 2, p. 99; Lieutaud. Hist. Anat. Med. lib. 2, obs. 702.

cope or irregularity of the pulse.* Their observations are amply confirmed by the cases under consideration, in neither of which did this symptom ever appear.

Vomiting is not mentioned as a symptom of Carditis by any author whom I have consulted, except Dr. Darwin; and he says it always attends this disease.† It occurred in one of Bang's cases; but there was so much disease in the thoracic and abdominal viscera of his patient, that it cannot be attributed to the inflammation of the heart exclusively. It was present during the last five

* De curandis Hominum Morbis, lib. 2. p. 177.

† Zoonomia, loc. cit.

days of my patient's life. That it does not always attend we have complete evidence in the case of Master W. where a contrary state of the stomach prevailed; as no such effect was produced, although very considerable and frequently-repeated doses of antimonial powder were administered.* Miss H. C. did not vomit until emetic tartar had been administered, even though the cardiac orifice of the stomach exhibited marks of inflammation. I can readily give Dr. Darwin the credit of having observed this symptom, as I do not believe he could have borrowed it from any writer upon the sub-

* See case 1.

ject; but he probably saw it only once, and, therefore, was not warranted in making that assertion. He was too apt to deduce general laws from solitary facts.* It is, moreover, to be lamented that he has not given a more particular account of the other symptoms.

Vomiting, though not a usual symptom of this disease, may be easily explained. The stomach is known to sympathize with almost every part of the body, and with

* "Solent autem homines naturam tanquam ex præalta turri et e longo despicere, et circa generalia nimium occupari; quando si descendere placuerit, et ad particularia accedere, resque ipsas attentius et diligentius inspicere, magis vera et utilis fieret comprehensio." Bacon. Aug. Sc. lib. 2, cap. 1.

the heart in particular. When the action of the latter has for some time ceased, and again returns, as in syncope, vomiting frequently takes place. In the paroxysms of Angina Pectoris, likewise, the stomach is disordered through sympathy with the heart, and the patient finds relief in eructations, and sometimes in slight vomiting. The converse of this also happens; the action of the heart being influenced by affections of the stomach. Thus, palpitation is frequently excited by indigestion; and nausea seldom fails to lessen the force and frequency of the pulse.

The *pain in the insteps and left shoulder*, described in the case of

Miss A. do not appear to have been observed before. This may at least be said of the former; and though it would be difficult to account for them, they are not more inexplicable than the pain at the top of the shoulder from inflamed liver, or than the pain in the arms which takes place in the paroxysms of Angina Pectoris.*

* I am aware that some attempts have been made to explain this symptom of Angina Pectoris, but they are by no means satisfactory. Increased action of the pectoral muscles is certainly inadmissible as a cause. In the true Angina Pectoris there is scarcely any difficulty of breathing; by no means sufficient to produce so painful an affection of the muscles employed in respiration. Equally unsuccessful have been the attempts to explain the pain of the shoulder

It would be satisfactory to know whether they were peculiar to this case, or have been overlooked in others. The pain of the left shoulder is not so extraordinary as that of the insteps; it is mentioned as having shifted to that part from the left side, in an

from inflamed liver, that of the glans penis from a stone at the neck of the bladder, and that at the pit of the stomach from a gall-stone in the cystic duct, with many other sympathetic associations. The most obvious explanation is founded on a community of nerves or vessels between the parts thus influencing each other, where that can be traced; but, besides the examples already adduced, many others might be mentioned of sensitive association between parts, the nerves of which are distinct in their origin as well as in their distribution.

unusual affection of the heart, accompanied with a fatal effusion of blood into the cavity of the pericardium; and which happened after a violent attack of inflammatory rheumatism.* In Hildanus's dissection, quoted by Dr. Freind, where the pericardium was inflamed, and contained above four pints of fluid, *pain about the left scapula* is mentioned as one of the symptoms.† Lieutaud has a case from Lancisius, in which *pain of the left shoulder* was observed. There was an aneurism of the aorta; and the pericardium contained

* Medical Observations and Inquiries, vol. iv. p. 330.

† History of Physic, vol. ii. loc. cit.

two pounds of grumous blood, in consequence of a rupture of the right auricle of the heart.* It was one of the earliest symptoms in an inflammation of the heart, complicated with pneumonia, given at length by Riverius.† This symptom, then, seems not unusual in certain affections of the heart and pericardium. The same cannot be said of *the pain in the insteps*, for it does not appear that such an association has ever been noticed before; and it must be left to future observers to determine, whether it was merely anomalous in this instance, or pre-

* Hist. Anat. Med. lib. 2, obs. 658.

† Riverius. Obs. cent. 1, obs. 87.

cisely of the same nature with the shifting pains recorded by Dr. Haygarth in the case of Master W. and which attacked, occasionally, the head, abdomen, hip, leg, ankle, heel, feet, and hands. These, likewise, are not mentioned by any other observer of this extraordinary disease.

While this sheet was in the press, Dr. Birkbeck informed me of a case, which lately fell under the observation of himself and his colleague, Dr. Clutterbuck, in their Dispensary practice. They had not an opportunity of seeing the patient (a young girl) till some days after the commencement of the disorder. The inflammation of the heart was complicated with

pneumonia, as shown by dissection. But the most remarkable symptom was a *tetanic affection.* Thus, it appears, that, in Carditis, a variety of symptoms, denoting a high degree of nervous excitement, do not unfrequently occur.

However complicated the symptoms may appear in the case of Miss A. there cannot be a doubt of the heart having been primarily attacked by inflammation. Pain was felt in the region of the heart, during eight days, without any symptom of pneumonia. The pulse was quick, but neither full nor hard. The nature of the attack, then, might have been suspected, if it had been one of more frequent occurrence. Besides, the

pain in the insteps and left shoulder diverted the attention of the practitioner from the true cause and seat of the disease; and made him lose sight of the anguish that was felt in the region of the heart, which, if it had been considered more deserving of attention, ought to have obviated all doubt and perplexity.

Another circumstance contributed to create in his mind an erroneous opinion as to the nature of the disorder. Not long before the attack a *lumbricus* had been voided; and as many anomalous symptoms are supposed to arise from the presence of worms and sordes in the stomach and intestines, it was natural to attribute

those which could not otherwise be accounted for to that doubtful cause; especially as the best systematic writers enumerate, amongst the symptoms which derive their origin from such a source, acute pain in the side, cough, dyspnœa, pain in various parts of the body, &c. This is so strongly insisted on by Frank, who is an author of the first celebrity, that I shall not hesitate to transcribe his words. "Quemadmodum de cynanche aliisque inflammationibus dictum est, sordes in primis viis collectas, earundem non raro fomitem offerre; sic et thoracis non modo pungentes dolores; sed quævis peripneumoniæ symptomata hoc ex fonte impuro frequenter, ac inter-

dum sub epidemico influxu propullulant. Facilis quidem hoc in judicio error subrepit, ac frequentius certe inflammationis cum gastrico apparatu complicatio hic occurrit; quam quod ex solis in abdomine saburris ad tam insignem pectus consensum provocetur; interim nec hoc ipsum aliquando deest; atque tussis, dyspnœa, anxietas, dolorque pectoris cum febre conjuncta, non aliam subinde nisi abdominalem, et ex bile saburra, vermibusque corruptis, agnoscunt originem. Ex solis interdum flatibus, apud hypochondriacos, hystericasque, per spasmum intestinis incarceratis, acutissimus ad costas, scapulasve dolor, ac frequens a

vermibus vel tussis, vel pungens in pectore sensatio excitatur."*

When the difficulty of breathing supervened to the pain under the sternum, some difference in the mode of treatment followed, and blood was drawn from the arm; but no relief being obtained, the inflammatory nature of the complaint was again lost sight of until the sixteenth day, the only time I saw her, when the pneumonic affection having increased to an alarming degree, she was bled a second time. As she was not more relieved by the second bleeding than by the first, it was

* De curandis Hominum Morbis, lib. 2, p. 139.

not repeated; which cannot be much regretted, if we consider, that, at this advanced stage of the disorder, there is no reason to suppose it could have been of any advantage. Had the real nature of the complaint been suspected at its commencement, it might probably bave been checked by timely and profuse bleeding. Towards the fatal termination, the palpitation became so extremely violent, that there was no longer any doubt of the heart being diseased; but the nature of that disease was explained only by dissection.

In Master W.'s case the affection of the brain appeared to be for some time the most prominent

feature; but the remedies indicated, and absolutely employed, for its removal, were the best that could have been adopted, if the inflammation of the heart had been suspected at the commencement of the disorder. Blood was drawn both before and after pain had been felt in the region of the heart. It gave relief, but did not cure. We may, however, be permitted to conjecture, that if the lancet had been used more freely, at an earlier period, it might probably have been attended with more success. No blame can possibly be imputed to Dr. Haygarth for this omission, as he was not called in before the fourth day of his patient's illness; and when he first

prescribed it on the fifth, it was with a view to relieve the affection of the brain, no pain in the region of the heart having been described before the seventh.

In the case of Miss H. C. the affection of the brain superseded every other symptom. Blood was drawn with manifest relief. Whether it might have been more successful at an earlier period, and employed more freely, cannot now be determined. As it was not particularly indicated, to say it might, would be drawing a conclusion from circumstances, which it was not possible to ascertain during the life of the patient.

SECTION V.

Diagnostick Signs of CARDITIS.

AFTER what has been said already, no one will expect from me a satisfactory diagnosis of this obscure disease. I do not, however, agree with Macbride, that " it must be next to impossible to say precisely when it is present." On the contrary, if there should be, at any time, (without suspicion of the existence of any other disease in the chest,) great anxiety and pain in the region of the heart, with an extremely quick pulse, one might, I think, con-

sider the heart as being attacked by inflammation; and if either palpitation, syncope, vomiting, delirium, or other symptoms of nervous excitement, were superadded, this conclusion would be strengthened.

But if the more usual symptoms of pneumonia were always coëval with the pain and anxiety in the region of the heart, I confess that "it must be next to impossible to say precisely when Carditis is present."* That this

* If, likewise, such fierce delirium as happened in the case of Miss H. C. were to attend Carditis invariably, it would confound all attempts to distinguish this disease; as the patient must necessarily be deprived of the power of describing his sensations, in such a manner as to command attention.

is not the case has been clearly proved; for we have seen that an inflammation of the heart has existed for the space of eight days, unaccompanied by any symptoms of pneumonia, except pain, which, being confined to the region of the heart, might be distinguished from that which takes place in pneumonia. No other symptom of the last-mentioned disease was observed at any period in the case of Master W. and we may fairly infer the same with respect to Miss H. C. for had either cough or dyspnœa occurred, they must have been perceived by the medical attendants, or the nurse, as the delirium could not have prevented their detection. It is needless,

however, to employ arguments of this sort to prove the non-existence of pneumonia, when much stronger are to be found in the histories of the dissections of the two last. Here, then, we have three cases of *acute inflammation of the heart*, in all of which, contrary to the assertions of Macbride, Cullen,* and Darwin, the symp-

* In a manuscript copy of Dr. Cullen's lectures, which I have lately seen, there is the following remark. "Vogel's definition of Carditis is, *Cordis inflammatio, symptomata fere ut in peripneumonia, sed graviora*; and no doubt it is so." Dr. Cullen admits that *a chronic inflammation of the heart* may exist without pneumonic symptoms, and, thus, explains the appearance of erosions, ulcerations, and abscesses, where there had been no previous disorder of the

toms were distinct from those of
pneumonia; for this may truly be

lungs. These have been found, likewise, where there had been no symptoms whatever of such affections. Dr. Gregory, in his lectures on the Institutes of Medicine, related an instance of extraordinary slowness in the pulse, the number of pulsations in a minute being only 24. The patient had complained of frequent fits of uneasiness, for a long time, with a variety of anomalous symptoms. He died suddenly. Upon dissection, the heart was found slightly inflamed.—We frequently meet with abscesses in the viscera, brain, &c. which were not preceded by any marks of inflammation, as acute fixed pain, and fever.

I take this opportunity of correcting an error at page 44. It is there stated, that hydrophobia, as a symptom of Carditis, is mentioned in Daniel's definition only. When that sheet was printed off I had overlooked

said even of Miss A. in the earlier part of the complaint.

Vogel's character of the disease—" Cordis inflammatio, symptomata fere ut in peripneumonia, sed graviora, dolor vehemens in regione cordis, palpitatio, pulsus frequens ac inæqualis, hydrophobia; an semper?"

May not hydrophobia, if it really occur in Carditis, be ranked with those symptoms of nervous excitement which have been observed to attend this disease, viz. anomalous pain in various parts of the body, tetanus, delirium, &c.?

SECTION

SECTION VI.

General Observations on the Causes, &c.

"Rerum eventa magis arbitror, quam causas, quæri opportere, et hoc sum contentus, quod etiamsi, quomodo quidque fiat, ignorem, quod fiat, intelligo."

CICERO.

I Am entirely at a loss to assign any cause, either predisposing or exciting, for this disease. None can be deduced from the histories which have been related. Miss H. C. was of a full habit, hysterical, and menstruated at a very early period. Miss A. was of a spare habit, tall and well-propor-

tioned, had not menstruated, and was a stranger to hysteria. Both were subject to inflamed tonsils. The former had recently been thus indisposed; not so the latter. Miss H. C. had danced a few days before the attack, and Master W. had done the same on the day preceding the accession of fever; while Miss A. had used no such exertion.

It has been suggested to me, by an intelligent and experienced physician,* that all the cases were probably varieties of acute rheumatism attacking the heart; and that the inflammation which had appeared in the feet and ankles of of Miss H. C.—the pain of the insteps and shoulder of which Miss

* Dr. Sherwen, late of Enfield.

A. complained—and the wandering pain in Master W. belonged to that disease, although the joints of the two last were neither swelled nor inflamed. He was the more inclined to adopt that opinion, from the absence, in all the cases, of that *strong* rigor which is known to usher in every inflammation, except that of gout and rheumatism.—Whether internal parts become inflamed in any state of rheumatism seems very doubtful. It is not likely that this should happen, when the joints, which are known to be the common seat of the disease, have never exhibited such an appearance. May we not as well suppose the inflammation of the liver to be a rheumatic

affection, because pain is sometimes felt at the top of the shoulder? There are not wanting examples of affections of the brain, heart, and stomach, sometimes terminating speedily in death, in patients who were supposed to be labouring under acute rheumatism; but these have never been proved to arise from any translation of inflammation; nor is it well established that the complaint in those cases was acute rheumatism. "Tamen nonnullos curavi, in quibus rheumatismus fines consuetos transiliens in ventriculum, aut cerebrum, versus fuit. Cum autem inter quamplurimos rheumaticos hoc tam raro evenerit, fieri potest, ut me natura morbi fefellerit, et ut

ille revera fuerit strumosus, vel arthriticus, vel ad longum potius quam ad acutum rheumatismum pertinuerit."*

In gouty persons affections of internal parts are not uncommon, when the inflammatory state of the joints has suddenly ceased, without having attained to the ordinary degree of violence, or without having continued the usual time. In this manner the stomach and intestines are affected with violent pain, the former with anxiety, sickness, and vomiting; or the heart becomes affected, and pain and syncope are the symptoms; or the lungs, which are

* G. Heberden Commentarii, p. 394, ed. 2.

attacked with asthma; and sometimes the head, giving occasion to apoplexy or palsy. But we have no evidence of these affections arising from inflammation of the respective organs.—Inflammation of internal parts, attacking gouty persons, without retrocession from the extremities, or while free from any of the usual appearances of that disease, are with less propriety attributed to gout; since the gouty diathesis does not furnish its possessors with any exemption against such affections from causes independent of gout.—Hence the podagra aberrans, or misplaced gout of Dr. Cullen, ought to be removed from among the species of that disease.

Senac is of opinion, that the heart may become inflamed from the increased efforts which it makes to propel its contents, when their passage through the lungs is impeded by inflammation of those parts.* This is very much to be doubted. If it were true, this important organ could not so generally escape in severe peripneumony. We have seen three cases independent of such a cause. Besides, in various organic affections of the heart and large vessels, the greatest possible exertions are made by the former, without occasioning the disease in question.

He tells us, likewise, that Galen remarked this disease in the gla-

* Traité du Cœur, 1740, t. ii. p. 381.

diators. "Galen a remarqué cette maladie dans les gladiateurs; elle les faisoit perir dans peu de tems, et les accidents mortels qui la suivoient etoient les memes que ceux qui suivent la *syncope* cardiaque. L'inspection des cadavres pouvoit seule justifier une telle idée; la syncope même dont parle cet ancien médecin, ne confirmeroit pas son observation si elle n' eut eté appuyée du témoignage des yeux. Les violents mouvemens qui étoient inévitables dans les combats des gladiateurs poussoient une grande masse de sang dans les oreillettes et dans les ventricules. Cette plenitude qui surchargeoit le cœur pouvoit produire la syncope que Galen a observée.—

Quoiqu' il en soit, cet ecrivain ne connoissoit pas le cours des inflammations du cœur; il croyoit qu' elles enlevoient les malades rapidement. Mais les observations que tant d' auteurs nous ont laissées sur les blessures du cœur dementent l' opinion de ce grand médecin."*

I have examined such parts of the writings of Galen as were likely to furnish authority for this assertion; for Senac, in common with the generality of French writers, gives no reference to the authors whom he quotes. In the book to Thrasybulus, *Num Ratio tuendæ Sanitatis ad Medicinalem Artem, an ad Exercitationem spec-*

* Traité du Cœur, loc. cit.

tat, Galen treats largely of the Athletæ, and mentions the diseases to which their exertions rendered them obnoxious, among which we find the loss of sense and motion, and vomiting or spitting of blood; but not a word is said of the heart being inflamed. "Quare Athletarum nonnulli repente obmutuerunt: alii sensum motumque amiserunt, ac penitus attoniti facti sunt, mole illâ præter naturam, ac multitudine, insitum extinguente calorem, liberumque spiritui transitum intercludente. Quicunque autem ex ipsis mitiora mala patiuntur, rupto vase sanguinem vomunt aut expuunt."*

* Epitome Galeni Pergameni Operum, per And. Lacunam, 363—48. Not having

But in the fifth book, *De Locis Affectis*, the observation quoted by Senac appears in the following words:—" Inflammato autem manifeste corde gladiatores vidimus, haud aliter quam qui syncope cardiaca pereunt, obiisse."* If we admit, then, that Galen saw the heart inflamed in some of the gladiators, we are not to suppose that he was acquainted with the progress of the disease; as he thought that it killed suddenly.

The celebrated Meckel was of opinion that the muscular sub-

an opportunity of consulting a more complete edition of this author's works, I am obliged to rest satisfied with the epitome by Lacuna.

* Ibidem, 759—62.

stance of the heart could not be inflamed without the immediate death of the patient. "In juvene, viginti duorum annorum, pericardium inferius inflammatum, vasa ejus turgida, pulmones quidem naturales, sed vasa eorum copioso sanguine referta, animadvertit. Pericardio aperto pus crassum et flavum in conspectum venit, cordi vero crusta crassa adhæsit, ita, ut difficulter separari posset. De reliquo exterior cordis lamina inflammata fuit, neque vero ejus fibræ, et præter pus multam aquam in se recondidit pericardium. Ex his itaque ipsarum fibrarum cordis inflammationem, quam observatam nonnulli tradunt, imaginariam esse, eam-

que non nisi in ejus velamento locum habere, noster colligit. Statim enim ac fibræ cordis inflammentur, motum ejus cessare putat."*—Bonetus gives the opinion of Saxonia, who thought that life could not be supported longer than a day after the entire heart had been attacked by inflammation. "Quia experientia didici cum inflammatio totum invadit cor, non poterit transire naturalem diem."†

Meckel's opinion is invalidated by the cases of Miss H. C. and Miss A. In the former, the

* Commentarii de Rebus in Scientia Naturali et Medicina gestis, vol. vii. p. 703.

† Sepulchr. Anat. lib. 2, sect. 8, obs. 41.

membrane covering the heart was not at all inflamed, whereas the ventricles must have been in that state for some time before death; else, whence the extravasated lymph with which they were covered, and all the violent symptoms? In the latter, the inflammation extended to a considerable depth within the substance of the heart, which could hardly have taken place the instant before death.*

* Even penetrating wounds of the heart are not immediately fatal. "Vulnera cordi inflicta, quæ non alte in ventriculos penetrant, non protinus interimunt." Fernelii. Pathol. lib. 5, cap. 12.—A bayonet passed through the right ventricle of the heart, and the patient survived the accident

The following shows also how little some writers know of this disease. "Maladie extrêmement rare, et dont les signes sont très-incertains: Il est même douteux que l' ouverture des cadavres ait présenté le cœur enflammé. Il est à presumer que le malade doit périr au moment de l' invasion de l' inflammation du cœur."*

One source of the obscurity which hangs over Carditis has been found in its speedy termination. Although this may some-

upwards of nine hours. Medical Records and Researches, selected from the papers of a private Medical Association, London, 1798.

* Medicine expectante par C. Vitet. A Lyon, 1803, t. i. p. 345.

times happen, we have abundant proof of its continuing long enough (if duration only were wanting to assist our discernment) to make us better acquainted with its phenomena. In the two cases recorded by Lieutaud it lasted only three days; in Dr. Boisragon's about nine. Dr. Haygarth's patient died on the fifteenth day. It terminated on the twentieth, in the case which is related from Sauvages; and Miss A. lived twenty-six days after inflammation had commenced in the heart. Moreover, the histories of ulcers and adhesions, which have been noticed in the former part of this work, show that it has been of much longer duration, and even

that the patients have recovered.*

It would be satisfactory to know by what circumstances the very great diversity in the symptoms of Carditis is occasioned. The most intimate acquaintance, however, with the human frame, in the different states of health and disease, will not enable us to explain, why, in two individuals of precisely the same organization, as far at least as we are able to discern, an inflammation of

* In Riverius's case, life was protracted till the thirty-fourth day. Notwithstanding the inflammation of the heart was complicated with pneumonia in this case, there is every reason to believe that the complaint began in the heart. Riverius. loc. cit.

this most essential organ should have different symptoms.

When masses of inert unorganized matter act upon each other, the circumstances and the result are so simple and obvious, that no ambiguity respecting the cause and the correspondent event can arise. The same causes, therefore, produce similar effects.—Facts also may be explained in one way or another, according to the synthetical method; and if the explanations or hypotheses be not true, they may be plausible, and serve to connect the phenomena in a methodical series or order. Thus, the facts derived from some late and brilliant discoveries in electricity may be ex-

plained, either by the electrical hypothesis of the illustrious Volta; by the chemical one advanced by Fabroni, and supported by the greater number of the British philosophers; or, lastly, by that of Professor Davy, which reconciles, in some measure, the two former.* But, perhaps, neither of them will bear a comparison with all the phenomena.† Many che-

* Philosophical Transactions, 1807, p. 1. The discoveries alluded to are the Voltaic pile and battery, and the decomposition of various bodies, some of which were previously deemed elementary, effected by their agency.

† The value of a hypothesis appears to have been properly estimated by Epicurus. Τηρητεον τε, και διαιρετεον ὅσα μοναχην εχει τοις φαινομενοις συμφωνιαν, και ἅ ουκ αντιμαρτυρειται

mical phenomena, likewise, which are at present explained by the

τοις παρ ημιν γινομενοις πλεοναχως συντελεισθαι. "Attendendum ac discernendum quæ ea sint, quæ singularem habent cum apparentibus consonantiam, et quæ pluribus modis fieri consonum est iis quæ apud nos fiunt." Gassendi. Epist. t. vi. p. 156. Placing little reliance on any hypothesis exclusively, Epicurus gives all that he could invent, lest, by the omission of any, that which was true should be excluded. Thus, the changes of the moon, he says, may happen from her revolving upon herself, *supposing her to have a dark side*; or from some configuration of compressed air; or from the interposition of an opake body; or, lastly, by some other means, which, happening before our eyes, may explain similar effects. Again, the eclipses of the sun and moon may be occasioned by the extinction of those luminaries, or by the opposition of some

assumption of oxygen, or the base of oxygenous gas, may, with equal plausibility, be accounted for in another manner.

In the science of medicine, having for its objects the morbid changes that take place in matter to which vitality and reason have been superadded, and which are generally of so subtile a nature as to elude detection, or so complicated as to baffle all our attempts

other body, as the heaven and the earth, &c. He was, however, rather too fond of explaining phenomena in different ways. "Ce n' est pas assez pour Epicure d' avoir une bonne explication; il ramasse aussi les mauvaises, afin de faire nombre, et de peur de donner dans les explications exclusives." La Morale d' Epicure, tirèe de ses propres Ecrits par M. L' Abbé Batteux, p. 347.

to investigate their origin, we find that the same causes appear very often to produce dissimilar effects; the latter, therefore, cannot always be explained, and it rarely happens that a plausible hypothesis is applied to the phenomena of diseases. Nor should this excite much surprize; for if the causes which govern animated bodies in a state of health be for the most part hidden from our researches, those which influence them in disease must *à fortiori* be equally inscrutable.

There are hypotheses, the consequences of which will bear a comparison with all the phenomena; which may be said of the hypothesis of universal gravita-

tion by Sir Isaac Newton, and of that beautiful one, which has been applied with the greatest success by Æpinus, by Mr. Cavendish, and by Professor Robinson, to the phenomena of electricity and magnetism. Such as these, however, have never been dreamed of in the philosophy of medicine.

SECTION VII.

Insurmountable Difficulty of establishing the Nosological Character of CARDITIS, *with general Observations on Nosology.*

HAVING objected to all the definitions which have been given of the disease of which I am treating, it will perhaps appear extraordinary that some improvement in this particular should not have been attempted. My reasons for declining it are derived from the extreme difficulty (I might say impossibility) of es-

tablishing the characters of diseases.* The best nosologists have adopted a plan founded upon the principles introduced into botany; and artificial distinctions, (taken from the symptoms only,) as in the sexual system of Linnæus, have been the ground-work of their arrangements. This mode, however defective in a philosophical point of view, must be allowed to be superior to every

* Similar reasons have induced me to decline attempting a History of Carditis. The cases which have been related present so striking a want of uniformity in the attack and progress of this disorder, as to preclude the possibility of giving such a description as might enable future observers to determine its presence with any considerable degree of certainty.

other, since there is no reason to suppose that diseases can be arranged, with greater success, according to any more natural affinities that may subsist between them; which was attempted by Linnæus with respect to plants, and has since been pursued with considerable success by the able Jussieu.

Amongst other methods, for the sake of comparison, we may notice the *alphabetic*, if it deserve the name of a method; and the division of diseases, according to their duration, into *acute* and *chronic*, by Aretæus, and by Cælius Aurelianus, which has had many followers, and to which some modern physicians have added

*periodical.**—The *anatomical* order was preferred by some, which, as it pre-supposes a knowledge of the seat of the disease, must often prove fallacious. The same may be said of that founded on the causes. The only nosological attempt, however, previous to that of Sauvages, was made by Felix Platerus, who divided diseases into three classes, viz. *functionum læsiones, dolores, vitia.* This bears some resemblance to modern systems, notwithstanding a century elapsed between its appearance and the publication of Sauvages' work, without any intervening improvement.

* See Reports on the Diseases in London by Robert Willan, M. D.

If the characters of diseases were as fixed and determinate as those of plants, there would be less difficulty in discriminating *genera* and *species*, and thus arranging them according to that method which has been pronounced the best; but as they are subject to great variety and almost endless complication, the difficulty appears to be insurmountable. What botanist could distinguish a plant in the artificial system of Linnæus, the number of whose *stamina* varied, in different individuals, from one to twenty? or could Jussieu assign a place, in his more natural method, to any plant, the *stamina* of which have at one time an *epigynous*, and at

another a *hypogynous* insertion? This is precisely the case with the disease under consideration. It has more symptoms in one case than in another, and almost all of them common to other diseases. If there be a *pathognomonic* symptom, it is *the extreme anguish that is felt in the region of the heart.*— It might be placed in the second order of the third class in the arrangement of Sauvages, or in the second order of the first class in Dr. Cullen's Nosology; but we cannot give it a generic character, by which it shall be distinguished with certainty from other genera in the same orders. To fix *pathognomonics*, then, to every disease, is still a desideratum

in medicine. The experiment, which Sydenham, Baglivi, and others suggested, has been made with considerable diligence and acumen, and it has failed.*

But the imperfections in nosological arrangements do not all arise from the difficulty of fixing the characters of diseases. Many proceed from want of attention to, or ignorance of, the rules of methodical definition. For example: Dr. Cullen defines Enteritis—*Pyrexia typhodes; dolor abdominis pungens, tendens, circa umbilicum*

* Quod autem spectat ad historiam morborum, primo expedit, ut morbi omnes ad definitas et certas species revocentur, eadem prorsus diligentia ac ακριβεια, qua id factum videmus a botanicis scriptoribus in suis phytologiis." Syd. Op. Proleg.

torquens; vomitus; alvus pertinaciter adstricta. Now the generic character should run through all the species of a genus; but this important circumstance has been entirely overlooked in the present instance; for we find one of the species (Enteritis erythematica) distinguished as being *sine vomitu et cum diarrhœa.* Again, in his definition of Nephritis, *testiculi retractio aut dolor* is introduced, although every one knows that the disease is common to both sexes. Dr. Cullen, therefore, notwithstanding he professed to have taken the critical writings of Linnæus for his guide,* lost sight

* "Quod ad denominationem morborum attinet, in classium ordinum et generum

entirely of the following fundamental rules of that illustrious

nominatione, eas, quantum potui, regulas observavi, quæ in Linnæi *Criticis Botanicis* et in ejusdem *Philosophia Botanica,* ab. ill. auctore traduntur." Syn. Nos. Meth. Proleg. p. 38.

Upon shewing the manuscript to Dr. Robertson, of this city, he sent me the following commentary upon the *quantum potui* in the foregoing sentence. [To this gentleman I am also indebted for access to a valuable collection of medical books.] "Dr. Cullen, in his Lectures on the Nosology, observes, that every species ought to have the character of the genus, and that it ought to be enough to give the specific mark: this, however, even in Botany, is not always applicable. He gave *Ranunculus Hederaceus* as an example, which has only five stamina, whereas the other species of the genus have an indefinite number; and

naturalist. *Scias characterem non constituere genus, sed genus charac-*

then says, that if the character of the genus consist of five parts, and we find four of them in any species, although the fifth may be wanting, we must refer it to that genus: so in Nosology. This, however, he acknowledged to be a defect of system, which, though not perfect, was useful, and, as our knowledge extended, would become more so."

Such imperfections, as are here mentioned, I readily admit to be unavoidable. They abound in the sexual system of botany by Linnæus, and have been too often quoted by his enemies not to be generally known. Vide Tirocinium Edinburgense, Edinburgi, 1753, in 4to.—Linnæus did not attempt to conceal them, as many specific names derived from this source are to be met with in his arrangement: e. g. *Lychnis dioica, Cerastium semidecandrum, Spergula*

terem.—Nullus character infallibilis est antequam secundum omnes suas species directus est.

pentandra, &c. Nor did he set so great a value upon his system as many have imagined, considering it only as a step towards a natural method, of which he says, "*Primum et ultimum hoc in Botanicis desideratum est.*" Philosophia Botanica, no. 77, p. 27, 1751.

"*Methodus naturalis hinc ultimus finis Botanices est et erit.*" Phil. Bot. no. 206, p. 137.

"*Diu et ego circa methodum naturalem inveniendam laboravi, bene multa quæ adderem obtinui, perficere non potui, continuaturus dum vixero; interim quæ novi proponam: qui paucas quæ restant bene absolvit plantas, omnibus magnus erit Apollo.*" Class. Pl. p. 485.

That great man, moreover, who was never seduced by the illusions of self-love,

frankly confesses that his principles sometimes led him from the path of nature. "*Methodo mea coactus, secundum assumpta principia systematica,*" &c. Vide Adans, vol. i. p. 42.

It is alſo remarkable, that, after having demonstrated plants in his public lectures according to the sexual system, he explained privately to his most distinguished pupils the principles which he had followed in the establishment of natural orders, as we learn from Dr. Giseke, of Hamburgh, who afterwards published as much as could be collected from them, under the title of "Caroli Linnæi, M. D. &c. *Prælectiones in Ordines naturales Plantarum e proprio et Ja. Chr. Fabricii, Prof. Kilon, MSto.*" Here we find fifty-eight orders, which are for the first time named, and illustrated by a curious *genealogico-geographical map* of vegetable affinities.

It was the most profound conception of the end proposed in the search after a natural method, that suggested to Linnæus a

great and sublime idea, viz. that plants approach each other like districts in a geographical map, and that they ought to be grouped in the order of their affinities. "*Plantæ omnes utrinque affinitatem monstrant, uti territorium in mappa geographica.*" Phil. Bot. no. 77. p. 27.

Had the errors, upon which I have animadverted, been such only as are unavoidable in an arrangement of diseases, founded on distinctions taken from their symptoms, and governed by the rules which the Swedish naturalist has laid down in the works referred to by Dr. Cullen, they would not have been noticed. They are such, however, as clearly show that the learned Professor did not, in this instance, act up to the *quantum potui.*

SECTION

SECTION VIII.

Remedies of CARDITIS.

FROM the nature of the organ, and the disease with which it is attacked, the earliest recourse must be had to the most effectual means of subduing inflammation: bloodletting, therefore, should be employed more freely and promptly than in any other case of active inflammation, pneumonia not excepted. In conjunction with bloodletting, it might be proper to try the *sedative* powers of the fox-glove, especially if there be

any reason to apprehend dangerous consequences from too copious an evacuation of blood. A medicine which reduces the pulse in so remarkable a manner certainly promises to be a very valuable auxiliary. Before the discovery of this property of the foxglove, we had only two methods of lessening arterial action, viz. the withdrawing of a portion of the circulating fluids, or the production of nausea: and it may perhaps be contended that foxglove acts upon the last-mentioned principle; since, when given in sufficient doses, it seldom fails to occasion nausea. Practitioners, however, find that when it is cautiously administered, so as not to

disorder the stomach, the action of the arterial system is sometimes lessened in a very surprising degree.

Some have supposed that the power and activity of the heart are not diminished by its primary action upon this organ, but that manifest disorder of the functions of the brain always precedes the reduction of the pulse, when this medicine has been administered.* If such an effect had been generally observed, there is nothing in the circumstance to occasion doubt: for whether the power and activity of the heart be lessened by its immediate operation upon

* Clutterbuck's Inquiry into the Nature of Fever, part 1, p. 365.

this organ, or through the intervention of certain changes in the brain and nerves, is immaterial; to know that it has ultimately such a tendency is enough to authorize its exhibition in Carditis.

But it is not always in our power to reduce the force and frequency of the pulse by any mode of administering fox-glove: on the contrary, the pulse is sometimes rendered more frequent while the patient continues under its influence; which I had lately an opportunity of witnessing in a case of humoral asthma. The pulse at my first visit was 90, but, after small doses of the fox-glove combined with opium had been given during ten days, it increased to

110, and became irregular and intermitting, accompanied with faintness and other symptoms of nervous derangement. The medicine was persisted in a week longer, with the same effects. It was then discontinued, and, after a few days, the pulse returned to its former state.

It moreover acts differently upon different constitutions. To one patient half a grain will prove a full dose, to another several grains may be given without producing any sensible effect. I have been informed that the late Sir William Forbes, banker, in Edinburgh, and author of the Life of Dr. Beattie, was so little disagreeably affected by it, that,

having frequently used it with relief in a dropsy of the chest, he at length carried pills, composed of the powder, loose in his waistcoat-pocket, of which an unlimited number were taken whenever he felt an aggravation of the disorder. They operated merely as a diuretic. Infants have sometimes appeared to be less susceptible of its influence than adults. Dr. Cheyne found an adult unable to bear 30 drops a day of the same preparation, (the saturated tincture,) of which he was giving daily to a child, four years old, 120 drops.* There is probably,

* Essays on the Diseases of Children, vol. ii. p. 101.

as he remarks, some particularity in the infantile constitution, independent of disease, which resists the powers of this medicine; since it has been "given with safety to hectic, and probably consumptive infants, a few months old.* All the hydrocephalic children, to whom it was administered by Dr. Cheyne, bore very considerable doses. Does hydrocephalus render them less susceptible of its influence? This is the case with mercury; for it is extremely difficult to excite salivation in children suffering under that disease. Or are children always less susceptible of the mer-

* Beddoes's Essay on Consumption, p. 271.

curial action, and of the influence of fox-glove, than adults?

Whilst I venture to recommend the fox-glove as a powerful auxiliary in the inflammation of the heart, I would by no means be deemed an advocate for the extensive manner in which it is employed, by many practitioners, in various diseases. A medicine, that exhausts the nervous energy in so alarming a degree, should be administered with extreme caution, and in such diseases only as cannot be controled by a safer method. It was, therefore, not only allowable, but commendable, to make experiments with it in pulmonary consumption. These (I say it with regret)

have not been so successful as could be wished; and we now find that it was excess of zeal for the improvement of the healing art, which induced a lively and learned writer to pronounce "the exhibition of fox-glove in consumption, even in its more advanced stages, the most useful discovery in medicine;" and to "hope that consumption will as regularly be cured by the fox-glove as ague by Peruvian bark;" and to believe "that a majority of cases will yield to simple fox-glove."

It is only in the early stage of consumption, that this remedy can ever be administered with advantage. When that disease has advanced to its last stage, the

powers of life are so much weakened, that patients sink speedily under the dreadful increase of debility, which fox-glove induces. We have, then, to lament that a *specific* has not yet been found for pulmonary consumption; in the discovery of which the very high encomiums, lavished a few years ago upon this medicine, almost led us to believe. Subsequent experience, however, has taught us, that, if to augment the sufferings, and shorten the existence of an afflicted patient, be specific powers, fox-glove is entitled to the appellation; but if to lighten the horrors of a slowly-consuming disease, and impart the blessings of health, be the properties of a

specific, it has no claim to such a title.

Its advocates will say, that all the bad effects of fox-glove are owing to mismanagement. I contend that this is unfounded; and do aver, that, in phthisical persons, the fatal event has often been accelerated by it, even when administered in the most cautious manner.

The debilitating effects of this medicine, which cannot be too much deprecated in some diseases, may be expected to have a salutary tendency in Carditis, where it is of the utmost consequence to diminish the action of the heart; there being little probability of subduing inflammation in

this organ, while it is under the influence of inordinate action. The patient being in vigour, the objections that have been made to its use in the advanced stage of pulmonary consumption will not apply. How far its exhibition may be contra-indicated by the presence of vomiting, which sometimes takes place, remains to be considered. This symptom, probably, does not occur at that early period of the disease, when the fox-glove promises to afford relief.

Since the above was written, some experiments on this medicine, published in a work on pulmonary consumption, by Dr. Jas. Sanders, have fallen in my way; the conclusions from which are

entirely at variance with received opinions as to its general effects. From them it is inferred, that "each small dose of the digitalis, taken by a person in health, increases the force and frequency of the pulse; and if the doses be repeated, that they will induce an inflammatory action of the system; that also, in disease, the first effects of digitalis, exhibited in small doses, are to increase the force and frequency of the pulse." P. 274. If this be a fact, all that has been said of its use in cardiac inflammation falls to the ground; for if its ultimate effect, viz. the reduction of the pulse, cannot be obtained without previous increase of force and frequency, it must

be rejected altogether; and the names of many respectable physicians struck off from the list of TRUE OBSERVERS!!

Another narcotic vegetable, tobacco, nearly allied to the fox-glove by its medicinal properties, seems to recommend itself; since, when administered in a full dose, it enfeebles the action of the heart and arteries more than the fox-glove.

Hepatized ammonia, as it induces vertigo, drowsiness, nausea and vomiting, and lessens the action of the heart and arteries, appearing therefore to be a *direct sedative*, may perhaps be administered with the same probability of success, as the fox-glove or tobacco.

In conjunction with blood-letting and the exhibition of *fox-glove, tobacco, or hepatized* ammonia, the usual means of lessening fever, purgatives, and certain topical remedies,—as ice applied to the region of the heart, cupping, *and blistering*,—might *be* advantageously employed.

From the high opinion which many practitioners entertain of the efficacy of mercury, in arresting the progress of internal inflammation, I am disposed to recommend its exhibition; bloodletting and other evacuations having been previously employed to the full extent.

If there be any reason to suspect, that the inflammation of the

heart has arisen from the sudden retrocession of gout or rheumatism in the extremities, which some might infer from the case of Miss H. C. such means should be used as are likely to bring back the inflammation to those parts. Rubefacients, sinapisms, and blisters will probably answer this purpose.

RECAPITULATION.

It may not be improper to state briefly the principal inferences, which have been drawn from the facts contained in the foregoing pages.

1. Syncope and irregularity of the pulse, which *à priori* might be supposed to attend Carditis invariably, and which systematic and nosological writers have included in their definitions of this disease, did not occur in either of the Cases.

2. Palpitation happened in one Case, and then only in the advanced stage of the complaint, after adhesion may be supposed to have taken place between the heart and pericardium.

3. The usual marks of deep-seated inflammation, as rigor and flushing, were not observed; nor was there so much fever as might reasonably have been expected.

4. Delirium, which no author appears to have mentioned as a symptom of this disease, happened in two of the Cases.

5. Other symptoms, denoting a high degree of nervous excitement, viz. wandering pains, and spasmodic affections of various parts, and even *tetanus* (not recor-

ded by any author, as far as I know,) are observed to attend the Inflammation of the Heart.

6. Vomiting, mentioned by Dr. Darwin as a constant symptom of Carditis, happened in one Case.

7. So far from being always complicated with Pneumonia, as some authors have asserted, there was no symptom of pneumonic inflammation in two of the Cases. In the other, inflammation commenced in the Heart, and was confined to that organ during eight days; after which it extended to the lungs, and the usual symptoms of Pneumonia followed.

8. Inflammation may take place within the ventricles, which

seems not to have been observed before.

9. If there be any *pathognomonic* symptom, it is *the extreme anguish that is felt in the region of the Heart.*

10. From the relief which followed bloodletting in two of the Cases, it is probable, that, if it were employed more freely than has hitherto been done, the disease might be cured.

FINIS.

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